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Philosophical and Social Framework of Education

Reviews the literature for the three-year period
since the issuance of Vol. XXXIV, No. 1, February 1964

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FOREWORD

In this issue of the REVIEW, the *Philosophical and Social Framework of Education* issue, the humanities lie down together with the social sciences, as in past years, to effect a singularly interdisciplinary review of this vast field of research in education. The general organizational structure of issues in this cycle in recent years is carried forward here with one revision, the inclusion of a separate chapter on economics and education. Though the area of economics and education has been considered in previous issues under the section on social policy and education, it has emerged over the past several years as a distinct field of research in education and hence is offered here in a separate treatment.

The chairman is fortunate indeed to have had the occasion to work with such an able gathering of scholars, both the members of the committee and the contributing essayists. The contributors of each of the chapters are scholars distinguished in their field and need no introduction to the readers of the REVIEW. They do merit, however, congratulations on the work represented in the chapters following, in each case an important contribution to the REVIEW and to educational research. To the members of the committee and to each contributor the chairman offers his grateful appreciation.

JOHN HARDIN BEST, *Chairman*
Committee on the Philosophical and Social
Framework of Education

CHAPTER I

Philosophy of Education

JAMES E. WHEELER

William James, in a discussion of the nature of philosophy and of its relation to science, once said: "As fast as questions got accurately answered, the answers were called scientific, and what men call 'philosophy' today is but the residuum of questions still unanswered." James's comment is as illuminating today as it was when he made it some 50 years ago; and this is true in spite of an intensive effort on the part of some philosophers to make philosophy itself scientific. Philosophers of education, and philosophers generally, continue to do philosophy in different ways, and the term *philosophy* is as vague today as ever. It would be arbitrary now to apply stringent rules as to what constitutes philosophical work; accordingly, any work that seems to have been intended by its author as a conscious attempt to deal with the characteristic problems of philosophy has been regarded as fair game for this review.

It probably is impractical to note here examples of every kind of philosophizing going on at present. Rather, the major purpose has been to identify the major trends in philosophy of education and to note the more significant papers that define the trends. In general, textbooks will receive little notice.

It may be helpful to mention three major ways of doing philosophy, even though for what seem good reasons this paper will not be organized on the basis of the distinctions. Of course, existentialism cannot be included in the scheme because its force cannot be caught in distinctions of this kind. These ways are (a) synthetic system building—philosophy done in the "grand manner"; (b) analysis of the language of education and of some of its related sciences—commonly, work in this tradition is highly technical in nature, and philosophers engaged in such work usually eschew any interest, as philosophers, in the import of their work for the larger interest of men; and (c) efforts to employ the conceptual tools of language analysis, while also making some commentary on large and pervasive "problems of men." Such philosophizing concerns itself both with firm foundations and with vision.

It is true surely that of the three types of philosophy set out above, the third has been much more influential than either of the other two in early twentieth-century philosophy of education. For much of that period it provided a broad orientation for much educational theory and practice. But more recently, logical analysis and existentialism have captured the interest of many of the younger men.

Relation of Philosophy of Education to Educational Science and Practice

For a good many years now, philosophers of education have concerned themselves extensively with attempts to define philosophy of education. In the past three years there has been, mercifully, a lull in this activity. It is not that the problem is in any way solved, but that philosophers apparently are getting on with their work quite handily in the absence of agreement about the nature of the activity. However, Soltis (1966) described three familiar "dimensions" of philosophy of education and suggested the addition of a fourth dimension, that of the "field of education." This field is a "composite," and philosophers are to engage in a critique of the inquiries that make up the composite and of the composite itself. Maccia (1964) proposed that philosophers of education add the logic of education and of "educatology" to their other activities.

There is an abiding interest in the relation of philosophy and theory to educational practice. The relation of philosophy to theory has received little explicit attention recently, but interest in the relation of theory to practice has continued. Newsome (1964) concluded that there is no "logical," i.e., necessary, relation of theory to practice; rather, theory is related to practice through a set of directions or prescriptions. Newsome had little to say about the nature of the directions, but Gowin (1963) directed attention to a much broader range of problems involved in the relation of theory to practice. The outcome of his discussion, however, is distressingly obscure. Perkinson (1964), noting the obscurity, suggested that the term *educational theory* be dropped and the term *strategy* be adopted. Gowin (1964) rejected the suggestion on the ground that the concept of strategy would unduly limit educational inquiry and practice. A relation between theory and practice is acknowledged by all parties, but the precise nature of the relation remains unclear. Howell (1964) held that philosophy does "control" other beliefs through the activities of philosophers in clarifying beliefs and in seeking to discover the kind of evidence that is relevant to judgments in education. Guttchen (1966) returned to a consideration of the implicative force of philosophy for educational practice. He denied that philosophy has any deductive relationship to practice and asserted that it guides it only "indirectly." A bolder conclusion would be that philosophy directs education in no sense and guides it only in very subtle ways. Bayles (1966) held that philosophy does imply ("logically entails") certain practices. However, he asserted that such implications were not from philosophy alone, but from philosophy and other premises such as the "assumptions of democracy," etc.

Additional References: Willhoyte (1965); Wynne (1964).

Existentialism and Education

Perhaps the discussion of existentialism and education has been somewhat compromised by the tendency to try to determine the supposed "implications" of existentialism for education. It would be regrettable if this approach stifled an interest in existentialist writing and comment on education. No doubt the more common approach has value, but there is in much of the literature a certain failure of sustained grasp of existentialism in its many manifestations that must be regarded as a defect.

Denton (1964) sought to save Camus from his existentialism and associate him with the classical philosophic tradition. Thus Camus is said in some respects to approach a position more like Greek realism than existentialism. Nevertheless, in the development of his argument Denton notes that for Camus limits are not limits, but "central tendencies"; rebellion is not revolution, but moderation; and lucidity is not intelligibility, clarity, or rational grasp, but moral insight. Morris (1965) held that both analytic and existentialist activities were legitimate, and he asked for a *détente* in the competition among philosophers of these persuasions. Nash (1965) found Morris' conception of both "analytic-scientific" and existentialist philosophizing defective, claiming that he had created new dualisms and unnecessarily resurrected old ones and that his "ideological schism" between the two is "Morris-made." Nash is on sound enough grounds here, but his argument that there is not and could not be such an ideological schism because both approaches to philosophy are "skeptical and critical of all ideologies" obviously is mistaken.

Another criticism of Morris is found in Skorpen (1964). The thrust of his argument is a criticism of Morris' view that value is the result of and is warranted by, and only by, absolutely free choice. He particularly objected to Morris' view that even a choice made on the weight of evidence is a restriction against freedom and against value, and held that this view is contradicted in the arguments of important existentialists. He expressed agreement with some of Morris' views, e.g., that man is not merely a rational animal. Skorpen's argument is something of a model of helpful analysis.

The most extensive statement of the existentialist approach to education during the period under review, and the latest and most carefully considered of Morris' philosophic efforts, is his *Existentialism in Education* (1966). The book is quite readable, and it is usually possible to see what it is that is bothering Morris. He wants, among other things, students to be *involved* and he wants them to be seen as *subjects* and not as *objects*. One may share, profoundly, these interests and yet reject Morris' analysis of both the leading ideas of existentialism and those of alternative philosophies.

Greene has made from time to time significant contributions to the literature on existentialism and education, but she has usually done so

indirectly and in the process of pursuing another goal—that of keeping alive an appreciation of the many and various meanings involved in man's existence. Her work *The Public School and the Private Vision* (1965) is a sustained effort to present the perceptions and orientations of artists and commentators other than those in the "mainstream" of educational thought. Greene (1966) argued not that we are free to reason as we please, but that reason is only one of the experiences that contribute to man's total understanding.

Soderquist (1964) approached existentialism from the standpoint of the personalist and seemed to read into it, and seek from it, the things that lend comfort to this perspective. As contrasted with Greene, he does appear to hold that there are truths and knowledges, e.g., those of self-knowledge, not subject to the ordinary rules of inquiry and logic.

Smith (1965) attempted a breakthrough with respect to the problem of meaning by a "creative union" of the existentialist and linguistic approaches to philosophy. He concluded that man both makes and receives meaning—it is somehow both subjective and objective. Teachers, he said, should realize how difficult it is to obtain meaning these days and yet be clear that "the problem of life-meanings is not a pseudo-problem." Vandenberg (1966) criticized Smith severely, holding that neither existentialists nor analysts could accept his characterization of their approach to philosophy. Vandenberg's most strenuous objection was to Smith's attempt at a "transcendental deduction," whereby he turned an "experience philosophy" into a kind of realism.

Vandenberg (1965) criticized Kneller (1964) for a "misequation of phenomenology and existentialism" and, in a perceptive passage, went on to suggest that an analysis of the "temporal structure of average everydayness for the various stages of human life would be both genuinely existentialist and educationally significant." One may hope that the sort of analysis suggested by Vandenberg comes to be characteristic of existentialist writing.

Additional References: Baker (1966); Bowers (1965); Hill (1966); Troutner (1964).

Linguistic Analysis in Education

Analytic philosophy today is subject to much metaphilosophical discussion. There are complaints that it restricts unduly the scope of philosophic activity. Agreeing that all philosophers must concern themselves with language analysis, some hold that philosophy is not exhausted in it. Put differently, it is held that analytic philosophy is not to be confused with philosophic analysis. Rather, linguistic analysis has to do with the way we say things are, but what things *are* is another question.

In any event, linguistic analysis has been with us long enough to become itself a matter of concern and comment, and perhaps it is well to note some

commentary by way of introduction. Gotesky (1965b) and Hook (1963) raised somewhat similar questions about the contribution of linguistic analysis to the specific problems confronting educators. Kneller (1966) credited philosophical analysis with helping philosophy of education to "independent and professional" and suggested that analysts go on to investigate the "facts" and "activity" of education. Broudy (1964) asserted that the results of linguistic analysis are not impressive because too many of the problems in education are not problems of misuses or abuses of language, and suggested that analysts set themselves the task of working out the relations of the problems of education to the behavioral sciences. A look at what analysts are actually doing may be the best way for the reader to get some idea as to the worth of the critics' position.

It is worth noting that at least two very important books in the field of analytic philosophy have been reprinted at least once during the period under review: *Authority, Responsibility, and Education*, by Peters (1965), and *Language and Concepts in Education*, edited by Smith and Ennis (1966). The latter was noticed in a previous REVIEW, but the former escaped attention. It is, however, so well known now that one need here only call attention to its continuing influence. Moreover, Peters' work is available elsewhere in the literature, and some of what he has had to say recently is by way of response to criticism of his 1959 book. Peters (1965), in an article entitled "Education as Initiation," denied that education has ends extrinsic to it. He noted that men, unlike flowers, do not have a pre-determined end that serves as a final cause of their development and asserted that talk about ends of education is largely a matter of determining what there is in the activity of education that is intrinsically worthwhile. Hence, such talk is talk about standards. All this sounds quite Deweyan, but Peters is critical of Dewey's idea of education as growth and finds that Progressives in general neglect the idea that education involves cultural transmissions of worthwhile content. Education as initiation, however, includes all that is worthwhile in the Progressive view and adequately allows for transmission. This statement led to a most interesting discussion among several philosophers.

The notion of indoctrination has received considerable attention from analytic philosophers. Atkinson (1965) argued that indoctrination differs from instruction in that the latter may aid the student in making progress in a field on his own while indoctrination does not, and that indoctrination tends to obscure the important fact that there are "open options" in morality, hence moral education. Flew (1966) denied that indoctrination can be only a matter of aim and only a matter of doctrine. He held that an adequate account would include both content and aim and that we would be well advised to linger as little as possible with present usage and to devise, or try to devise, a new notion with its own usage.

Moore (1966) claimed that owing in part to Dewey's influence, indoctrination in the United States has always referred only to "method" in-

struction. He welcomed the extension of meaning suggested by Flew and suggested that we accept as fact that learning "necessarily begins with an authoritative and indoctrinative situation." Apparently Moore holds that some content might be indoctrinated safely.

Komisar and Coombs (1964) undertook an analysis of the concept of equality and found two meanings: "same" and "fitting." The first has a determinate meaning, the second an indeterminate one. The principle of equal opportunity, they stated, employs the fittingness concept, and therefore a definite interpretation requires prior ethical commitment. Macmillan (1964-65) held that equality in the fittingness sense implies sameness and agreed with Komisar and Coombs that there are two concepts; the difference between them, however, is one of type, not of determinateness. Sameness, he asserts, is the *ideal* that parties contesting over equality invoke.

Scheffler (1965) attempted to give an account of epistemological problems in their general form and from the perspective of educational tasks and purposes. Among the more interesting outcomes is his association of teaching with rational explanation and critical dialogue and his stress on the *manner* of teaching and knowing. Taken as a whole, his book is perhaps more valuable for the light it throws on the general form of epistemological problems than it is for its relevance to educational tasks and purposes: still, his purpose is sound and his conclusions suggestive.

A short survey such as this evidently cannot hope to give more than a hint of the range and quality of work done by linguistic analysts, and the reader will have to look further before he can evaluate the criticisms mentioned. That linguistic analysis has had a disciplinary effect on philosophical discussions in education is hardly in doubt, however. Some further examples of linguistic analysis are presented in the subsection on philosophical psychology.

Additional References: Archambault (1965); Brodbeck (1963); Hollins (1964); McClure (1964).

Normative Philosophy of Education

In general, the work under consideration in this section has to do with construction of some kind of theory or some system of ideas that will offer some measure of guidance or afford some broad view of education to which a kind of commitment is possible. Some of the writing seems to be aimed at the construction of rather elaborate systems encompassing the whole of education, but other writers have had more modest aims.

Kaufmann (1966) held a "vision" of the possibilities of man and society to be the central focus of philosophy of education, and felt that normative philosophy is an attempt at rational support of our assessment of aims and purposes.

Schneider (1965) found little relation between education and the "learning to study" that is characteristic of school learning. The educative

process, he held, should result in a "living integration of meanings into the personality structure." Aiken (1966), along a similar line of thought but with special respect to liberal education in the colleges, asserted that education, so conceived, is not simply a matter of knowing about things, but a matter of knowing them ever more appreciatively and discriminatively. A tolerable philosophic approach to education, for Aiken, must consider all of the "characteristic ways of handling and doing things that, when they succeed, we call knowledge."

Broudy (1965) discerned four modes of knowing—(a) replicative, (b) applicative, (c) associative, and (d) interpretative—and held that the school tended to concentrate on the first two while the last two have become the most useful in modern society. Moreover, the interpretative aspect is central for "general education." It is in the structure of a discipline that the "fairly fixed" model of a learning outcome is found, and the learning experience is to be shaped by that structure.

Phenix (1964) undertook to provide a philosophy of curriculum. He was concerned with things he terms "integrated," "unitary," "total," etc., and stated that these things as they relate to personality may be achieved best if the plan of study is governed by the goal of wholeness. Man, he claimed, seeks meaning, and his proper curriculum is the six realms of meaning. It is very difficult to decide whether this is a play on words, and there are certain logical difficulties in his conception of six fields, two of which bind all the fields together. It may be noted that Phenix was only one of a number of writers who interested themselves in problems of the structure of knowledge.

Brameld (1965) attempted to relate some perennial educational concerns to the theme of "education as power." In an age of power, and in a world that can be understood in terms of the search for power, he held that education itself must become powerful. Only the power of education, he believed, is greater than the other powers that man has brought under his control. Nevertheless, and disappointingly in view of some of the controversy over Brameld's actual view on related notions, the notion of education as power does not obviously illuminate nor was it illuminated by the various views and issues he discussed. But Brameld did reaffirm here and elsewhere his belief in the necessity of "commitment . . . to an enforceable world order," his belief that there is no necessary conflict between emotional commitment and intelligence, and his devotion to democracy. Brameld's use of the term *existential humanism* has given rise to some concern about the influence of "existentialism" on his recent thought, but a reading of Chapter 8 suggests that there are no crucial modifications.

Nash (1966) explicitly set himself the task of combining "clarity and commitment" in the one philosophic effort. He held that he was doing philosophy in the strict (analytic) sense and also trying to "prescribe" a bit. It is not easy to provide a brief statement of the outcome of Nash's reflections, but perhaps one may say that he hoped to discover a dynamic

relationship between authority and freedom by analyzing the relation of certain polar terms, e.g., work and play. Dialectical his approach is, but he insisted that the dialectic is not an exercise in the logical and necessary. One impressive aspect of the work is its faithfulness to context in all of its analyses.

Butler (1966) attempted a direct and "self-critical" appraisal of idealism as a modern philosophy of education. He concluded that idealizing is relevant to a "present-day audience," and among its strengths he listed the characteristic insistence on the reality of self as the focal point of philosophizing. Among the weaknesses he noted is a tendency to mitigate the "high level of self-realization" idealism requires, thus reducing essentially religious objectives to mere moral aims.

According to Belth (1965), the discipline of education as a "discipline of disciplines" is an independent one, and its subject matter is the complete act of thought. The "act of education" is the process of facilitating intellectual development. One might well consider this work as belonging to the analytic tradition, but fundamentally it is normative in character.

Additional References: Ford and Pugno (1964); Phenix (1964).

Whitehead, Dewey, and Other Philosophers

A large part, perhaps the largest part, of what passed for educational philosophy for many years has had to do with a criticism of the works of the great, near great, or merely fashionable philosophers of education. The period covered by this review is no exception to this rule, but it may well be that the trend is away from this approach. Of course, this is not to say that discussions of the works of other philosophers have not been found worthwhile. Nevertheless, in general, such discussions may be more valuable in the context of a consideration of some particular problem or issue in philosophy of education, or in an avowedly historical context, and interest seems to be shifting to such considerations. In any event, a considerable literature on Dewey and Whitehead was produced in the period under discussion, and aspects of the work of other distinguished philosophers were also discussed.

Whitehead

Dunkel (1965) tried to place Whitehead's work in a perspective that would reveal its import for education and help educators to understand him. Holding that much of Whitehead's work, owing to its systematic and comprehensive character, is "literally incomprehensible even to professional philosophers" unless it is seen as a whole, or at least unless parts of it are read with due regard for what is said in other parts, he tried to bring about such an integration in behalf of Whitehead's educational

views. However, according to Dunkel, Whitehead's systematic philosophy is not a "doctrine." Still, he deplores the fact that although Whitehead gives "abstract cosmic generalizations" and "quite specific examples," he fails to provide "middle principles." These middle principles are "subordinate principles" which lead from the general principles to the specific decision or case. Dunkel seems to conclude that the best hope is that the practitioners themselves will furnish the "middle principles" (Whitehead himself regularly deferred to the experience of practical schoolmen), so that what is really needed is to make Whitehead's thought more accessible and more intelligible. Dunkel's book serves as an interesting, although somewhat loosely organized, introduction to Whitehead's educational views.

Brumbaugh (1966) sought to discover what Whitehead must have meant in his assertion that the education of his time was one-sided and that attention must be paid to "aesthetics, but not in the usual sense." Concentrating on a little-known paper of Whitehead, he concluded that this notion is not a conventional one and that it is a profound insight. Brumbaugh leaves for another time any attempt to establish a connection between Whitehead's aesthetic theory and his analysis of science. One senses in the work of Brumbaugh (see also his 1965 article) some promise that Whitehead's work will become less obscure: so far, however, the promise remains a promise.

Dewey

Kobayashi (1964) studied Dewey's influence on Japanese educational thought and the reasons for that influence and found that the influence is considerable and that the Japanese consider Dewey's philosophy meaningful in "understanding Japanese existence."

Archambault (1964, 1966a, b) edited and also wrote helpful introductions to three recent books on John Dewey. One is a selection from Dewey's own writing: another, selections from some of Dewey's critics: and the third, the publication of lecture notes from Dewey's Chicago days. In the lecture notes, Archambault believed that he found the "foreshadowings" of many of Dewey's later views on such things as habit, growth, discipline, and moral education. Archambault's introductory essay to the lecture notes is helpful, although there are some errors, and his "Introduction" (1964) is valuable for its perceptive comments on the ends-means relationship.

Wirth (1966) attempted an appraisal of Dewey's educational views by concentrating on the period when Dewey was a "practicing educator," that is, the period of the University Elementary (or Laboratory) School in Chicago. Although Wirth missed the full significance of the fact that Dewey was essentially a philosopher of the spirit, he has produced a valuable and significant work. For a brief discussion of a related point, see Wheeler and Ratner (1965).

Ratner (1961) accurately assessed Dewey's place in educational history, recognizing him as a modern Socrates. Wellman (1961) raised a familiar objection to Dewey's theory of inquiry, arguing that one does not just *know* that he is faced with a problem; rather, he can only *believe* that such is the case (but compare Morganbesser, 1966). Bayles (1966) gave an extended account of the pragmatic viewpoint on education. Boydston (1965, 1966) translated from the French two articles written by Dewey and, apparently, not previously published in English.

Other Philosophers

Among the other philosophers whose work was examined during the period were Kilpatrick, Bode, James, Jefferson, Herbart, Peirce, and some of the existentialists.

Additional References: Heslep (1966); Winetrout (1961).

Value and Education

Discussion of both the general problems of value judgments in education and interpretations of such judgments in educational contexts is increasingly sophisticated. Even general considerations of value tend to be interpreted in the context of particular educational problems, and less attention is devoted to the alleged implications of systems of philosophy for problems of value.

General Discussion of Values

Smith (1966) held that the old dichotomies, fact-value, belief-attitude, etc., that have controlled inquiry into problems of values for years may have lost this significance and that present inquirers would be better advised to attempt a "retroductive" construction of value theory complex enough both to account for data and to be coherent. Levit (1963, 1964) and Sleeper (1964) carried on a useful discussion of noncognitivist ethics, particularly of some recent innovations in that position. Both believed that the methods of the empirical sciences may have some relevance to ethics but differed on whether noncognitivism constituted a barrier to a scientific treatment of ethics.

Gotesky (1965a) found three common conceptions of excellence ("ideal," "comparison," and "attainment") to be inadequate in present circumstances. He asserted that all three conceptions involve "grading systems" in one way or another and that grading systems are constructed from the relations of things as equal (equality relation) and unequal (ordering relation). Excellence as a function of "grading systems," he held, provides a more basic notion and offers more flexibility than do the common conceptions of excellence, and a society must be prepared to change its "order-

ing rules" as experience indicates. Hollins (1964) defended, with Dewey, a relativist position in value theory but sought a greater stability than he believed Dewey's theory to provide.

Morals and Education

Rich (1964) took the position that moral education should start with the question, "Why be moral?" and that such education finds its substance in an analysis of the justification of the moral life. Rich attempted a justification of moral living and concluded that the rightness of an act, once decided upon, is a *sufficient reason* for its performance. Pai (1966) held that right action requires a "religious devotion" to belief and that in addition to knowing what is right one must help children develop the "character" to act it.

Some Recent Themes

There are at least two interesting recent if not entirely new themes in philosophy of education. One is philosophical psychology and the other the history of philosophy of education. Philosophical psychology is new in the sense that there is a renewed interest in the field among both philosophers and psychologists. History of philosophy of education may be said to be new in that only recently has it aroused an explicit interest.

Philosophical Psychology

Perhaps the most stimulating work on philosophical psychology during the period is that of Green (1964, 1964-65, 1966). He held that although the concept of teaching is essentially vague, nevertheless some precision with respect to its structure is possible, and he attempted to "describe in schematic form . . . the logical properties most central to this family of activities" and to show how other related activities fail to exemplify the concept. Teaching, he held, is that activity which, engaged in, "contains the conditions for the nurture of free human beings." Hay (1965) offered a sympathetic criticism of Green but held that Green occasionally treated matters of fact as if they were matters of logic, sometimes failed to give reasons for his assertions, and was insensitive to some of the many uses a word may have.

In an important paper Komisar (1965) objected to analyses of the use of "learn" in recent literature and held that such analyses were mistaken in that they failed to grasp adequately what is involved, not in the "arcane and peripheral" cases of learning, but in the most obvious and trivial senses. He found four "modal" senses: "learn that . . . , learn the . . . , learn to . . . , and learn to be . . ."; in all of these senses, to have learned something implies that the learner's performance accords with the "mean-

ing" of the thing learned. Komisar holds the "high point" of the concept to be "learning to be"—it implies self-consciousness.

McClellan (1966), in the context of a discussion of B. F. Skinner's "philosophy of human nature," criticized some aspects of Green's (1961, 1964-65) analysis of teaching. McClellan took Green to hold that "rule-conforming action" is behavior and, as such, is subject to the characteristic methods and language of behaviorism, but that "rule-obeying action" is distinctively human and therefore independent of behavioristic criteria. McClellan attempted to show that "rule-obeying action" is better understood as continuous with "rule-conforming action" so far as description of learning is concerned, but that no questions of the truth or falsity of such claims properly may be raised. Newsome (1966) criticized both McClellan's interpretation of Skinner and his use of linguistic analysis to settle what Newsome took to be questions of fact, properly settled by experimentation. He also criticized Green, Skinner, and McClellan for confusing descriptions (laws) with prescriptions (rules). Taken as a whole, Green's paper and the replies to it constitute something of a high point in the brief career of philosophical psychology, illustrating both its strengths and weaknesses.

Additional References: Anthony (1964); Bruner (1966); Fen (1966); Komisar (1966); Noel (1965).

History of Philosophy of Education

History of philosophy of education taken in one sense is the oldest and in another sense one of the newest interests of philosophers of education. No doubt one reason for its perennial interest is that philosophy never quite outgrows its history, as the sciences appear to do. In any case, the classic figures of philosophy and their characteristic doctrines have always had a certain fascination for some people. Of course, not all interest in classic figures has a distinct historical bent, but there has been and is such an interest. Frankena (1965) put the educational philosophies of Aristotle, Kant, and Dewey in a historical perspective, and Chambliss (1965a) did the same for Chauncey Wright.

Some of the writing on Dewey (e.g., Wirth, 1966; Archambault, 1966a) and on Whitehead (e.g., Brumbaugh, 1965, 1966) was in some measure historical writing. However, in none of these is there any really systematic account of the history of philosophy of education, and none of them pretends to give such an account. Frankena, for example, explicitly stated that his main purpose was to "help teach the student how to do philosophy of education," but he also sought to teach him something about the history of philosophy of education. Frankena actually says very little about history but tends to go directly to the three philosophies as "constructions" in their own right. Of course, an accurate account of the "constructions" is itself an important contribution to history.

No systematic treatment of history and philosophy of education exists as yet, but in the work of Chambliss (1965b) we have the beginning of one. Most of his work is not yet published, but the general thrust of his interest appears in his treatment of William T. Harris and others. One awaits Chambliss' further work with interest.

Additional Reference: Brauner (1961).

Conclusion

A trend toward a larger measure of philosophic competency in philosophy of education was noted in previous REVIEWS. This trend is continuing, but there is an even more important trend—one toward treating the problems of education philosophically as opposed to "applying" some philosophical system to education. Development of the sciences that relate to education and educational process will generate problems to which philosophical analysis is relevant. Taking this with the delight inherent in doing philosophy of education, one expects to see the field continue its recent healthy development.

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CHAPTER II

History of Education

CHARLES BURGESS

History is vast and complex. It is strewn with perplexing ambiguities. To compound matters further—and to flirt with a pompous truism—its legitimate perimeter is no less than the uncharted range of human imagination, of man's quest for understanding and identity. Everyman, in an intensely relevant sense, is indeed his own historian; and in the observation that each human being is himself a historical phenomenon resides support for the judgment that all knowledge—and ignorance—is historical.

One who prefers truth to myth and understanding to mystery indicates, however crudely, some appreciation of the historian's task. The historian, however, is expected to oppose crudeness, superficiality, and conscious abuses of historical evidence: wherever veracity can be established, he is charged to prefer it to viscera. Dilettantism in all its forms is regularly isolated as the most baleful impediment to truths.

The Truths of History

The plural form of truth is critical. It provides the essential reminder of the probability that no two historians will agree on all central details of any one historical view. Lest it seem that a full circle has been described—one that leads away from the unsophisticated observations of Everyman only to return—one should note those accepted standards of precision, credibility, and grace that make the professional historian symbolize something more than a *primus inter pares*. His methods, areas of concern, and major preconceptions about the past may differ dramatically from those of his fellow historians. The standards nonetheless remain constant. Respect for pluralism in the quest for understanding implies similar respect for a legitimate range of diversity in the conduct of the historical enterprise. In a critical account of recent American humanistic scholarship, for example, Knapp (1964) provided statistical evidence which buttressed the judgment made by Higham (1965) to the effect that history has become in the last two generations an increasingly democratized field of inquiry. Knapp made much of historians' preference for standards of "sagacity and style" to methodological uniformity, noting this as a major source of their confidence "in their mission and their effectiveness as scholars. . . ." In these and several related respects, Knapp concluded that among the humanistic disciplines history stood "in the most fortunate circumstances."

Divergent Methods and Convergent Premises

In his search for signs of change among contemporary historians, Knapp made special note of the shift, especially on the part of younger historians, away from the humanities toward closer liaison with the social sciences. Granting the fact of this shift, its significance seems especially to be found in the adding of even greater methodological diversity to history. Apt illustrations of the range of methods, from that of the moralist-litterateur to that of the quantification-scientist, for example, were afforded by Saveth (1961). His edition of exemplary studies of American history explored many of the more suggestive lines by which history has been profitably integrated with concerns and methods heretofore more exclusively peculiar to the social sciences. But historians, as Aydelotte (1966) noted, "have come nowhere near exploiting" the full potentialities of social science quantification methods. Nor have historians always applied the methods of number wisely. While remaining "conservative and skeptical" about the place of quantification in history, Aydelotte concluded that quantification, in spite of its substantial limitations and difficulties, could become "a powerful tool in historical analysis."

Although they were both similarly aware of the recent marks of diversity in method, Higham (1965) and Skotheim (1961) argued in effect that such signs of diversity were quite misleading. In more fundamental respects history seemed to be influenced by convergent premises. Referring to the climate of opinion among historians, Higham noted a general reaction to the guiding premises of earlier historical views. Histories bearing the Progressive stamp, in particular, with their near-Manichean preconceptions about conflict, faith in science and in popular culture, and neolenged by a recent "cult of American Consensus." Progressives' optimism has met headlong opposition in the form of searches for stability and nonteleological continuity as well as in the form of remorseless quests for causes of moral disintegration in the American experience. Higham noted that much of the most substantial recent research has amounted to a study of tragedy. The psychological approach, eschewed by Progressive historians, has been instrumental to this end. It has permitted much recent historical effort to turn rational disagreements into internal psychic conflict, and has hoisted pessimism to pinnacles of respectability. But Higham offered no fast assurance that a corner had been turned: for an increasing number of historians, in search of truths about structure and process rather than motive, seemed to be giving new life to man's hardy respect for human rationality. Above all, in a midcentury wavering with moral uncertainty, Higham observed, historians of all philosophical predispositions seemed especially to be asking—and with unprecedented insistence—"What (if anything) is so deeply rooted in our past that we can rely on its survival?"

Historiography of American Education

The historiography of American education suggests belated but potentially parallel developments. Cremin (1965) studied the historical purposes and intellectual milieu of Ellwood Patterson Cubberley in an able effort to assess his achievements and explain the protracted power of his ideological grip upon twentieth-century historians of education. Cubberley, who stood within the circle of most widely accepted genetic views of the past, remained, as Cremin contended, relatively insensitive to certain historical lapses. His description of nonexistent roots of "public" education in the Colonial era was judged an anachronism. Cubberley, it was further noted, pinched the meaning of education into "schooling," which confined his research to the historical "rise" of institutions of learning. The third of Cubberley's "cardinal sins against Clio" rested with his evangelism, with his effort to promote professional zeal often, and unfortunately, at the expense of encouraging greater historical understanding. These "sins," with the possible exception of evangelism, were endemic among historians who studied education at the dawn of the present century. The historical significance of Cubberley's history of education, however, rested with the momentous fact that "there has been no overall rethinking of our educational history" since the appearance of his *Public Education in the United States* in 1919. Nothing like the massive re-examinations in general historiography (which were reviewed by Higham, 1965, and by Skotheim, 1964) has occurred in the history of education. In calling for the reopening of questions once considered settled and for the reintegration of formal education with the broader strands of cultural and intellectual history, Cremin also implicitly explained the *leitmotiv* of his forthcoming major history of American education.

The question particularly of Cubberley's evangelism, however, did continue to hang broodingly over debates about revisionism in educational history. The revised report of the Committee on the Role of Education in American History (1965) once again stirred reactions which pointed to the continued vitality of the Cubberley tradition. Since the appearance of the original report in 1957, it had been taken to be a fact of great importance that the Committee was drawn overwhelmingly from the ranks of general historians. The Committee itself, convinced that educational history had failed to follow recent historiographical canons, apparently saw this fact as significant. Historians of education whose sense of snub was expressed by Brickman (1964) agreed. One need not deny that an oversight had been committed. Vastly more important, one might insist, was the fact that the members of the Committee met as representative historians who affirmed that education was a legitimate field of inquiry. The historic condition which once contributed heavily to the missionary spirit among educational historians—e.g., the kept-scholar syndrome, the unexamined acceptance of the Cubberley ideology, and isolation from the mainstream

of historical scholarship—was sharply challenged. As a goad to the investment of greater and more diverse energies in explorations of the many perplexing unknowns in educational history, moreover, the encouragement afforded by the Committee could prove to have been inestimably salutary.

Additional References: Baird (1965); Herbst (1965); Park (1965).

Colonial and Nineteenth-Century Views

Signs of a widening range of historical preconceptions and increasing dialogue have appeared in educational history since 1963. In a well-documented study of the middle schools ("secondary education") during the eighteenth century, Middlekauff (1963) traced lines of conduct that were more noteworthy for continuity than for conflict. His exploration of primary materials emphasized the durability of the Puritan tradition of learning. The utilitarian dimensions of that tradition in effect turned Franklin's preference for a more satisfactory union of the "practical" and "ornamental" into a plea for a new definition of "practical." Moreover, Franklin's perceptive awareness of the needs of "A Rising People," declared Tyack (1966a), led to a notion of practicality that placed particular stress upon a systematic approach to "self-education."

Leading educational reformers of the early national period were also found to have ignored the contradiction between their desire to form a "national character" and their announced purpose of preparing Americans for a life of free reasoned choice. Tyack's (1966b) study of this blindspot in Thomas Jefferson, Benjamin Rush, and Noah Webster illustrated the persistence of elemental indoctrination in educational thought. Burgess (1964), in a comparison of orthodox Federalist and radical Deist educational views, suggested that insensitivity to the question of indoctrination extended beyond the realm of the more visible spokesmen.

General historians' heightened concern for the tragic made slight but important headway among educational historians. Greene (1965) was able to sketch the darker side of the American educational mind by placing education in context with such figures as utopians, transcendentalists, Hawthorne, Melville, Norris, and Fitzgerald. The tension between the easy optimism of educational leaders and the somber concerns of those beyond the earshot of the schoolhouse afforded a provocative but seldom considered angle of vision for educational history.

If in transcendentalism there appeared, as Greene implied, an alternative to relatively unreflective popular views, there also appeared wellsprings of inspiration for educational reformers. Jones (1966) found Emerson's educational doctrines etched deeply in the mind of Horace Mann. Both Jones and Greene further testified to an increasing awareness of the limitations inherent in the notion that "schooling" is the sole object of educational history.

Horace Mann

Jones discussed Horace Mann incidentally: but Mann became the central object of serious re-examination in several recent studies. Messerli (1966), who is currently preparing a major biography of the Massachusetts reformer, examined salient features of Mann's childhood and concluded that the popular analyses of Mann's encounter with Death and Reverend Emmons lacked credibility. Concerning Mann's years as a student at Brown, Messerli (1963) found the debating society experiences, once a common collegiate activity, to have been singularly valuable to Mann's career. The formal and informal environment at Brown was instructively portrayed. That Mann, rather than James G. Carter, was selected as the first secretary of the Massachusetts Board of Education has been a long-standing perplexity. As Chambliss (1963) noted, Carter was not merely a pioneer of reform in the state: his mind was agile and his logic precise. Carter's sophisticated understanding of Baconian induction might have gained wide hearings in American thought had Carter, rather than Mann, been selected by the board. But Carter's assets were outweighed by his liabilities, Messerli (1965a) argued. Judging the requirements for a successful nineteenth-century reformer, Messerli concluded that Mann was not a lucky choice; rather, he was a likely choice. As a state official, Mann's handling of dissident power blocs convinced Messerli (1965b) that Mann developed a consistent and pedagogically sound policy, one free of the basic impulse of opportunism or boot-licking.

Motive as Historical Problem

Lannie (1964), Pratt (1965), and Van Deusen (1965) provided a modestly useful example of the difficulties encountered when calling human motives into question. New York Governor William Seward's efforts as an educational reformer provided the subject matter. Lannie criticized Pratt's notion of Seward as the political realist; Pratt attempted to demonstrate the inadequacies of Lannie's image of Seward as the altruist and argued that educational history, when restored to cultural context, would prove to hinge on more—and more complex—factors. Van Deusen's effort was conciliatory but gave no unsullied support to either the Pratt or Lannie view. *Additional References:* Burgess (1963): Cross (1965): Davis (1964): Harding (1964): Levin (1964): Morgan (1966): Rudolph (1965): Veysey (1963).

The Progressive Era

Progressivism in education might well be described as an impulse, for in its dynamic years it was organized in little more than name. Yet, as impulse or as movement, Progressive reform owed some lasting debt to formal committee endeavors.

The Committees

Krug (1961) and Sizer (1961) critically examined the purposes and accomplishments of representative groups involved in debating the course of secondary education. Sizer, concentrating upon the influence of the Committee of Ten, found its report to have been widely misapplied and misunderstood. His volume included a reproduction of the famous report, a helpful guide to his examination of the work of the Committee. Krug, more concerned with the developmental stages of secondary education in the early years of the present century, also included analyses of later pivotal organizations and seminal contributors. His study drew heavily from primary material theretofore unpublished.

Whatever Americans might have thought of the shaping of their secondary schools, Beck (1965) found that German observers singled out American high schools for special criticism. These schools were seen as not only neglecting their college preparatory function in favor of serving as schools for the "masses" but also as being especially derelict in their foreign language programs.

In his assessment of the Committee of Fifteen, Button (1965) concluded that the group's idealist-based attempts to reform elementary education were swept aside by empirical psychology. Thus, he noted, did ideas of "efficiency" supplant the Committee's expectations of humanitarian excellence.

Individual Reformers

Francis Parker, a leading spokesman of the Committee of Fifteen as well as a famous schoolmaster, drafted in his last years a plan for an ideal school. Tostberg (1966) traced the shaky career of this dream school for which Parker unsuccessfully sought the support of the University of Chicago.

Wirth (1966) insightfully traced the plans and practices of John Dewey during his decade (1891-1901) as an educational colleague of Parker in Chicago. During these important years emerged Dewey's outline of ideal formal education, one based upon firsthand experience. Open-ended, unfinished, Dewey's work refused to become outmoded in its general frame in spite of the sweeping cultural changes of the last half-century.

In a reassessment of Herbert Spencer's once popular appeal, Kazamias (1966) judged the more unlovely elements in Spencer's thought to be at least as much the product of historical distance as of fact. Spencer's appeal to educational reformers should be understood in terms of the nineteenth-century moods and the viable alternatives then available. Greater historical sensitivity, Kazamias argued, would thereby regain a fairer hearing for Spencer.

Strickland and Burgess (1965) presented a reappraisal of G. Stanley Hall, leader of the Child Study movement and a psychologist who enjoyed

a wide following among educators. The authors concluded that Hall should also be identified as a purveyor of social and educational elitism, racist doctrines, and eugenics as public policy. His philosophy was marked by virulent strains of incipient totalitarianism.

The Negro in American Education

Long before the Progressive era and, as Wish (1964) noted, its agonizing debates about racial equality, educational reformers stumbled over the issue of the Negro and learning. Calvin Wiley, as Ford (1964) explained, struggled awkwardly to hold the principle of Christianity-in-action aloft while walking the rope of political survival. And in the administration of the vaunted Peabody Education Fund in the South, West (1966) sustained John Hope Franklin's judgment that those managing the Fund "lent their influence to the white South in its efforts to make the Negro a second-class citizen. . . ."

The Education of Educators

Borrowman (1965) outlined the range of historical positions taken with respect to the preparation of American teachers. Amid the voices, confused and confident, that have challenged and defended the place of "education" in higher learning, Borrowman's documentary history isolated lines of argument that continue to be drawn. Institutional studies of teacher education provided examples of these lines of argument. Hug's (1965) history of the School of Education at New York University represented an acceptance of the ideals and efforts of professional education. Powell (1965) remained less than convinced of the place of education in his informative study of the establishment of "pedagogy" at Harvard University under the reluctant hand of Charles W. Eliot.

Additional References: Boskin (1966); Bowers (1964); Brauner (1964); Calista (1961); Cohen (1964); Harlan (1966); Hofstadter (1963); Neyland (1964); Ratner, Altman, and Wheeler (1964); Rippa (1961); Soderbergh (1965); Thayer (1965); Yengo (1961).

Higher Education

Veysey's (1965) cogent history of the rise of the American university represented an exemplary illustration of what Higham described earlier as renewed interest in institutional structure among historians. Veysey described the emergence of an Americanized system of university education largely out of an alien and elitist background. Accommodating itself to necessity and native ideals, the university became an instrument of social control and service to American sentiment. Its flexibility was the

more surprising in view of its willingness to pay "the price of structure." Hawkins (1966) focused upon Charles W. Eliot and Daniel C. Gilman as prime creators (or adaptors) of the university ideal in America. Competition between these two college presidents further encouraged new innovations—and some petulance—in academic life. Castel (1961), while applauding the failure of the founding fathers to establish a national university, saw in those attempts the enunciation of important principles that were also to help determine the course of American higher education.

Problems of student discipline accompanied the increasingly complex patterns of university life. As old lines of control and student-teacher relationships began to fall, Solberg (1966b) explored the frustrations and failures of early attempts to transfer more authority to the "governed" at the University of Illinois. Peterson (1964) described the difficulties encountered by the anxious, small New England college that struggled, amid the din of university expansion, to sustain collegiate ideals and practices in the spirit of the Yale Report.

Lee (1963) provided a historical reminder of the place of federal efforts and funds, through the Morrill Act, in promoting American educational ideals at the college level. Curti and Nash (1965) turned to an examination of private sources of financial support for higher education, noting that few American institutions bore "the marks of private, voluntary giving as noticeably as higher education." Their study included foundations, corporations, alumni associations, individual donors, and explored a wide range of purposes in giving.

Additional References: Beach (1965); Buck (1965); Dunbar (1963); McGiffert (1961); Porter (1961); Sack (1963); Schmidt (1961); Urofsky (1965).

Religion and Science

Attempts to create modern institutions of higher learning amounted as well to attempts to move clear of more restrictive ties to denominational or overriding religious purposes in learning. Solberg's (1966a) case study of the bitter struggles to cast out compulsory chapel attendance at the University of Illinois provided a helpful illustration of the conflict between older, religious and newer, secular notions about the purposes of the state institution. Similar ambivalence appeared in the policies of Charles W. Eliot of Harvard. Hawkins (1961) described Eliot as a reformer unable to keep from dragging his ideological heels in response to the tug of science and secular purposes. Instead he elevated the Divinity School and disavowed denominational connections; but "what he called nondenominationalism was often, as critics charged, Unitarianism raised to the *n*th power."

Barnes (1961) noted the suspicion which greeted history as well as science in academe prior to World War I. Were these pursuits to become

threats to or partners of religion? This question regularly appeared as a paramount concern of academicians who continued to view collegiate goals in moral-religious terms.

In his study of E. L. Youmans, editor of *Popular Science Monthly* during the late nineteenth century, Leverette (1965) gave useful judgments of more popular attempts to instruct a wider public about naturalism, free inquiry, and the separation of religion and science in rational human affairs.

Additional References: Clegg (1964); Cohen (1965); Findlay (1966); Lynn (1964); Mitchell and Skelton (1966).

Textbooks

Foreign observers of nineteenth-century American teaching practices did not often miss the peculiar Yankee affinity for textbooks. Egerton Ryerson of Canada, for example, found the American dependence upon textbooks productive of anti-intellectual attitudes and poor teaching techniques. Whatever methodological mischief schoolbooks might have caused, however, was, in Elson's (1964) depressingly instructive study, of less consequence than the narrow intellectual and social prejudice, racism, and Protestant-nationalist jingoism advocated in the textbooks. Elson examined approximately 1,000 texts in the several fields of common school education in preparing her history of educational ideas.

Carpenter's (1963) chronicle of American schoolbooks provided a first-rate bibliography and the quaint notion that the profit motive played a small role in accounting for the countless, rapid-fire revisions of texts. Degler (1964) traced the South's self-image as revealed in Southern history textbooks. He found the expected racial stereotypes set forth, but apart from such related serious distortions, concluded that the work was quite well done in the face of intense regional defensiveness.

Additional References: Alilunas (1963); Black (1964); England (1963); Ford (1961); Nietz (1961); Sahli (1963); Younker (1963).

Afterword

A further word might be added with respect to historians' perspectives on their craft. Over the last few years a small but growing body of what has been called revisionist literature has appeared in the historiography of American education. As suggested earlier, several of the above-cited works might be placed under this rubric. Those who support the purposes of mid-revisionism see it as an attempt to recapture the past in terms of mid-twentieth-century insights: it implies honest efforts to preserve more substantial truths and expose fallacious myths. To opponents of revisionism,

the term seems to suggest unfortunate changes in the purposes of educational history, changes that include even opportunism, vindictiveness, and unwonted hostility toward the historical giants of educational reform. Whatever the word might mean, its appearance signals not only the dynamism of historical distance and the prolific accumulation of historical facts since 1919: it is as well an index of the widening circle of scholars who are beginning to find in educational history important and fruitful avenues of inquiry.

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CHAPTER III

Social Policy and Education

LOUIS FISCHER and DONALD G. LAHR

The broad area of education and social policy invites a wide range of scholarly research, analysis, exploration, and subjective pontification. In reviewing the area, we attempted to exclude only the last type of materials. The research on equality of educational opportunity is reviewed first, followed by materials relevant to church-school relations, federal aid to education, and international education. The concluding section includes studies of the public views of educators as well as matters related to academic freedom.

Integration and Segregation in Education

U.S. Office of Education Survey

Overshadowing all previous studies in the field of equality of educational opportunity are the surveys and case studies conducted under the auspices of the U.S. Office of Education, operating by the express mandate of the Civil Rights Act of 1964 and with the generous resources of a \$1.5-million Congressional appropriation. The already published reports of these studies provide the most comprehensive data available to the researcher and practitioner and are among the most definitive works in the field. Additional reports will soon be available. The master report of this project (Coleman and others, 1966) and the summary report (U.S. Office of Education, 1966) described (a) the degree and extent of Negro, Puerto Rican, Mexican-American, Indian, Oriental, and "majority" or "white" group segregation and integration in American public education; (b) educational quality as measured by a wide variety of school and teacher characteristics; (c) educational attainment as measured by standardized achievement tests; and (d) the relationship of school, teacher, and student characteristics with educational attainment. Also, the reports described educational opportunities for Negroes at colleges and universities, examined the dropout rate for majority and minority groups at different socioeconomic levels, and presented case studies of school integration in selected districts focusing upon the implementation, progress, and problems of programs. Data were presented so that comparisons could be made among regions and among metropolitan and nonmetropolitan schools as well as among groups on a national level. Space permits the review of only a few of the more important findings and conclusions.

Adequately documented in the report were the general inferiority of school facilities, the relative meagerness of school programs, the overcrowding, and the lesser quality of teachers in predominantly Negro schools. Regional variations in the magnitude of differences between "white" and Negro schools were found to be substantial, with the greatest difference usually found in the South. Comparison of means for standardized achievement tests among racial and ethnic groups confirmed the findings of previous studies showing that Negroes obtain the lowest levels, whites the highest, and other minority groups (with the exception of Orientals) fall in between. The differences between white and Negro means increased as years of schooling increased, and these differences were greater in the South than in the North. Also, the grade level gap between the national norms and Negro achievement means increased with successive years of education. When socioeconomic factors were statistically controlled it was found that differences among schools accounted for only a small part of the achievement. There were significant regional and ethnic variations, however, with the quality of schools having a greater impact upon minority groups, particularly upon Negroes in the South. When crude measures of family educational background and educational aspiration were used, it was found that being in a school with others of similar or different backgrounds and aspirations had little effect upon the achievements of whites. For minority group children from relatively nonsupportive backgrounds, with the exception of Orientals, attendance in a school with others of supportive backgrounds and higher aspirations was likely to have a positive influence on achievement.

Greater than the effect of differences in school characteristics upon achievement was the attitude factor of belief in the control of the environment and of one's own destiny. Minority group children were less likely than whites to indicate a belief in control. However, those minority group children who did indicate a belief in control obtained higher mean achievement scores than whites and minority group children who did not indicate a belief in control. Compared to those Negro children from schools where the enrollment was less than one-half white, the Negro children from schools where the enrollment was more than one-half white tended to indicate a greater degree of belief in control and to obtain higher mean achievement scores.

Minority Culture and the Schools

Gottlieb and Ten Houten (1965), examining the social systems of three Midwestern high schools, discovered that Negro students in a previously all-white high school tended to engage in activities within the formal system. Patterns of informal associations developed along racial lines as the proportion of Negro students increased. However, racial considerations in the choice of activities by students disappeared as desegregation became more complete.

Cooper (1964), using data obtained through the Georgia State Department of Education, compared the reading achievement of Negro and white children in grades 4-12 attending largely segregated schools. She found that although the reading level of both groups decreased in relationship to the national norms as years of schooling increased, the Negro decrease in reading level was more severe. St. John (1966), comparing the educational aspiration of Negro high school students from elementary schools containing different proportions of Negro students, found that the degree of elementary school segregation did not predict the level of aspiration. Brown (1965) compared the vocational aspirations of 11 matched pairs of Negro and white sixth-graders and found that the Negro group aspired to occupations of higher social status than did the white group.

Green and Hofmann (1965) documented the extent of educational deprivation among Negro children of Prince Edward County, Virginia, who had been denied schooling. They concluded that the measured academic ability and achievement of these children had been severely and adversely affected, and indicated that the reintroduction of schooling led to slight improvement. McGrath (1965) collected data about curricular patterns, financial resources, enrollment, budget and library facilities from questionnaires and college catalogs of 123 predominantly Negro colleges. He concluded that these colleges vary widely in character and quality and that since they would be in the immediate future the primary sources of educational opportunity for Southern Negro youth, the government and charitable foundations should devote more attention to the needs of these institutions.

Clark (1965) included in his well-documented and disconcerting portrayal of the condition of the Negro ghetto dweller a chapter which presents a penetrating analysis of the lower socioeconomic status Negro's view of the school and the social dysfunctions of the school in the ghetto. Pettigrew (1964), as part of his description of the psychological factors of Negro personality, contributed an analysis of research on Negro intelligence demonstrating earlier fallacies and presenting contemporary conclusions. Webster (1965) suggested that there may be some relationship between childhood maternal supportive behavior and self-concept. Radin and Kamii (1965) found that middle class Negro mothers tended to believe in setting definite limits on behavior and valued self-expression and independence for their children in contrast to the lower class mothers who tended to be overprotective, controlling, and repressive of sexual expression. Hess, Shipman, and Jackson (1965) observed that middle class Negro mothers tended to use more verbal cues and to show less anxiety in teaching their 1-year-olds simple tasks than did lower class Negro mothers. Manuel (1965) investigated problems which Spanish-speaking children in the Southwest United States encounter in relationship to the schools and discovered that linguistic, attitude, and economic areas were those which posed the greatest difficulties.

De Jure Segregation

Carmichael (1965) produced a critical, documented analysis of the history of Southern school segregation since 1951. He examined court decisions, traced stages of political and social resistance to desegregation, and attempted to establish patterns of community reaction and their relationship to varying social conditions. Leeson (1961), in a much less detailed fashion, also traced the history of desegregation from 1951 to 1963 and included data on numbers of pupils and school districts desegregated.

Gates (1961) analyzed the politics of Virginia's "massive resistance" to the 1951 Supreme Court decision and showed how the precedent of Virginia's legislative and legal reaction affected in a negative manner the peaceful transition to desegregation. Selected school districts which desegregated between 1959 and 1965 have, according to Wey (1964), exhibited acceptance of the Negro student by community, teachers, and fellow students. His conclusion that proper preparation leads to effective desegregation was echoed by Dalton and Carmichael (1964) in describing the desegregation of Chattanooga. They attribute the success to planning with teachers, students, parents, and power groups. Less sanguine about the prospects of desegregation without vigorous federal government enforcement under Section 601 of the Civil Rights Act of 1961, however, is Lieberman (1966) who maintained that compliance under the U.S. Office of Education 1965 guidelines was relatively insignificant and praised the more rigorous 1966 guidelines. Analyzing population data for Tennessee, Florida, and North Carolina, Pettigrew (1965a) found that resistance to desegregation was positively correlated to areas of rural populations with high concentrations of Negroes. He pointed out that in these areas the Negroes' and whites' ascriptive, diffuse, particularistic, and affective orientations combine with patterns of white violence and economic intimidation to erect strong barriers to desegregation.

De Facto Segregation

Although the U.S. Supreme Court has not ruled on the issue of de facto segregation, Roach (1966) maintained that the lower courts in their somewhat conflicting rulings have appeared to delineate a set of legal principles. He documented his thesis by an analysis of court decisions since 1954. Coughy and Coughy (1966), writing from the point of view of the American Civil Liberties Union, presented a frankly partisan review of the contemporary history of segregation and the attempts to desegregate in the Los Angeles City Schools. They narrate the story of numerous committee reports and projects, the labored attempts of the educational bureaucracy and certain members of the board of education to come to grips with the problem while denying its existence, and the effect of an undercurrent of covert racism.

Sociological analysis of communities in the North which have experienced school integration controversy has produced insights into the nature of the groups involved and a description of ideal types of opponents and proponents of integration. Luchterhand and Weiber (1965) found that in New Rochelle, New York, lower socioeconomic class Negro parents were more likely to request transfers to desegregated schools than were other parents. They inferred that, because of the size of the community and the intensity of the issue, the lower class Negroes had become more involved in educational questions than would otherwise have been expected and had also perceived the transfer as an opportunity to control their own destiny in an otherwise capricious world. Lang and Lang (1965) interviewed a sample of Jewish and Catholic parents who were embroiled in a controversy over the combining of two elementary schools to achieve racial integration. They concluded that while upward group mobility in the status system of ethnic groups may lead to opposition to desegregation, individual mobility may lead to a more cosmopolitan outlook.

Rogers and Swanson (1965) compared the receptivity of white parents from two areas of a Northern city to an integration proposal affecting both areas. They found that the area of low receptivity to the proposal was characterized by lower middle class homeowners, recent migrants from the slums, high levels of ethnocentricity, housing arrangements facilitating high levels of interaction in friendship groups, low participation in local political and social action groups, and limited support by local leaders for the proposal. Characteristic of the area of high receptivity to the proposal were upper middle class apartment dwellers, lower levels of ethnocentricity, high rates of participation in local political and social action organizations, and strong support from local leaders for the proposal.

Policy and Strategy for Integration

Pettigrew (1965b) maintained that the elimination of de jure segregation should be the first effort, followed closely by attempts to cope with the increasing pace of de facto segregation. He delineated five focuses: identifying conflicting political pressures of the community, locating the focus of responsibility for equality of educational opportunity, evolving techniques for implementation, blending racial balance and compensatory training, and achieving desirable interracial classroom environments. The Educational Policies Commission of the NEA (1965) made nine recommendations for combating de facto segregation. Wey (1966) discussed problems which must be solved before desegregation and integration can take place in the South. He emphasized the complexities involved and illustrated his position with anecdotes and statistics from selected school districts in the South. Dodson (1965), in attacking what he considered to be the bureaucratic myths and pseudo-scientific excuses for delay and avoidance of implementation of programs for desegregation, called for a

developing minority group power and experimental programs. How the Free Schools of Prince Edward County, Virginia, were established, operated, and what they achieved is described by the leader of the project, Sullivan (1965). He attributed the success of the venture to help from federal and state governments, private foundations, and to an innovative, flexible, and adaptable curriculum. His interesting and exciting description illustrates an activist's implementation of policy.

Additional References: Anderson and Foster (1961); Gottlieb (1964); Hickerson (1965); Picott and Peebles (1961); St. John (1964); Weinberg (1964).

Church-School Relations

Church and State in Education

The national controversy regarding the appropriate relationship between church and state continues unabated. Although the debate crested during the years immediately following the "school prayer cases" (Engle vs. Vitale in 1962 and Schempp vs. School District in 1963), an occasional high wave still appears. The most noted efforts during 1966 were those of Senator Dirksen of Illinois who attempted to amend the First Amendment. His efforts were not unique, only the most recent. Seckinger (1965) analyzed 152 joint resolutions, calling for constitutional revision to permit prayers and Bible reading in the public schools, submitted by members of the House of Representatives during the Eighty-Eighth Congress. The legislative flood was the aftermath of public reaction to the Engle and Schempp cases. Seckinger's analysis indicates that although congressmen seem to agree on the fact that an amendment is needed, they disagree on the kind they want. At least 40 different kinds of resolutions were submitted, but no agreement was reached on the type of proposal to support. A clear inference is the need for extreme caution and open discussion before there is any attempt to redefine the constitutional principles upon which our religious freedom rests.

A similar study exploring legislative efforts is that of Lachman (1965) who analyzed the various federal aid to education bills introduced in Congress during the period 1937-50. He explored the reasons for the bills together with the organizational support and opposition they received.

There is no shortage of articles, symposia, and books analyzing legislative and judicial developments related to religion and education. Orentlicher (1965) notes, among other matters, that Section 701 of the Higher Education Act of 1965 makes federal funds available as loans or grant aids to church-related institutions, provided that the facilities may not be used for schools or departments of divinity or for any facility which is used in any way for sectarian or religious worship. Hunt, Tremmel, and Kenealy (1964) discussed Supreme Court decisions and pointed up the unsettled question of the constitutionality of the NDEA Public Law 861 of

the Eighty-Fifth Congress passed September 2, 1958, currently being challenged because of appropriations of public funds to church-related colleges in Maryland. While no new information is presented in the symposium, there is some useful exploration of potential problem areas.

Brickman (1965) hailed the recent developments as providing a new birth of freedom in education and argued for public aid to private parochial schools. He proposed that freedom of conscience cannot be achieved otherwise, since without public aid the parochial schools stand in jeopardy. Clayton (1965), on the other hand, urged caution. Looking at the possibilities for church-state cooperation in education as a consequence of the Elementary and Secondary Education Act of 1965, he suggested that we learn from the experiences of some of the European countries. Citing his own study of England and the Netherlands during the years 1963-64 he concluded that there are serious problems and dissatisfactions as a result of state aid to sectarian forms of education in each of the countries studied. He warned that although it is not certain that the same problems would beset the American schools, we should be cautious and study the experiences of others lest we lose more than we hope to gain through our new developments. Although providing no new knowledge, Justice Douglas (1966) of the United States Supreme Court presented an excellent, authoritative summary of key cases interpreting the controversial First Amendment. Writing in nontechnical language aimed at the intelligent layman, Douglas drew on the experiences of other nations, both European and Asiatic. He favored continued separation of church and state, with the schools remaining secular. Stanley (1965) asserted that the current efforts to include religion in the public schools have little to do with conventional piety or with traditional religious beliefs. They are more likely attempts to restore order and unity, clarity, meaning, and purpose to life and education. Recognizing the fact that ours is a country of religious pluralism, Stanley examined and rejected five different proposals for relating public schools and religion. He concluded that the schools must remain secular and that the values and commitments which they teach and should teach must be those warranted by human reason. We can agree on intellectual and moral principles at the operational level, while we respectfully disagree on theological or philosophical first principles. The national debate continues; whether public funds should in any way accrue to any segment of private parochial schools remains unresolved, and so does the question of how, if at all, religion can enter the public schools.

Policy and Practice

Although there might well be a formal exclusion of religious instruction from the curriculum of the public schools, such instruction can and does take place in informal classroom situations. This conclusion was reached by Rogers and Burnes (1964) based upon a study in a Midwestern subur-

ban school system. They created a "classroom problems test" which was administered to 133 elementary school teachers. In the test, hypothetical but quite realistic situations were described, and teachers chose one of three alternative courses of action. The three types of responses were judged by Rogers and Burnes as "unqualified religious," "unqualified nonreligious," and "indeterminate." Based upon teacher responses to the 15 hypothetical situations, the authors concluded that while religious instruction does go on in many classrooms, its nature and extent are not known, nor are the constitutional questions raised by them answered by past decisions.

A useful guide, soundly based on the rulings of the Supreme Court, was produced by a commission of the American Association of School Administrators (1961). In its booklet the commission analyzed the heritage of religious freedom in our culture, presented the relevant principles and cases, and faced questions of school policy and practice. Sensitive points were located and recommendations made related to them, consistent both with constitutional limitations and educational ideas.

"Shared time" is a much-discussed policy that is yet to be tested in the courts. This plan, also known as "dual enrollment," is simply an arrangement whereby students of nonpublic schools enroll for part of their school day in public school classes. Section 205 (a) (2) of the Elementary and Secondary Education Act of 1965 refers to the "dual enrollment" plan. The bill does not authorize aid to private institutions, but it does contemplate some broadening of public educational programs and services in which pupils who are not enrolled in public schools may participate. Although there are no accurate statistics available on how widespread this practice is, a survey by the National Education Association (1965) indicates that it is in effect in 35 states and in at least 280 school systems. Both the educational consequences and the constitutionality of the arrangement are open to question.

Nielsen (1966), after a scholarly review of the historical and philosophic background of the controversy over religion and public education, concluded that any education, to be sound, must deal with the deepest of human concerns, such as death, salvation, suffering, origin, destiny, and evil. He asserted that an adequate exploration of such questions necessarily entails examining the contributions of religion. While Nielsen's contribution is scholarly, he, like others, gave inadequate attention to implementations, and thus the crucial questions of curricular content and methodology go unanswered. A similar effort is that of Phenix (1966) who would have every teacher be constantly aware of the religious implications of his subject. He proposed that religion is constantly manifested in the secular concerns of life; thus science may be seen as the "Wisdom of God," language as the "Word of God," ethics as the "Will of God," and art as the "Work of God."

Some authors, as the two immediately preceding, would alter public school policy and practice to include religion. Blum (1965) was more

interested in convincing his readers that public aid to parochial schools is appropriate, constitutional, and desirable, while Ryan (1961) raised profound questions challenging the desirability as well as feasibility of extending Catholic parochial schools whether through public support or through church funds. In a recent study, financed by the Carnegie Corporation and the U.S. Office of Education, Greeley and Rossi (1966) concluded that education in a Catholic parochial school seemed to make no significant difference in the civic behavior, social values, and attitudes of the students. Although the parochial schools did not produce the virtues claimed by their protagonists, they did not bring on the "divisive" effects claimed by their detractors. The study also concluded that the parochial educational system was moderately successful at inculcating precisely those norms already reasonably well accepted among American Catholics.

In light of the foregoing, it appears that we have many disagreements and unresolved controversies related to the church-state issue in education. It is safe to predict that the issue will be fraught with controversy for years to come. One reason for the continuing disagreement is the paucity of systematic research which might shed some light on the consequences of religious education and on the consequences of studying about religion.

Federal Aid to Education

Since the last issue of this REVIEW devoted to the topic of federal aid, Congress has enacted an unprecedented quantity of educational legislation. Included in this have been the far-reaching Elementary and Secondary Education Act of 1965, Economic Opportunity Act of 1964, and Higher Education Act of 1965. Complete review of the results of this new federal effort is beyond the scope of this article and must wait upon reviews in appropriate research areas. Although a large number of exhortative and interpretative articles have appeared, the amount of analytical and empirical research on the topic of the relationship between the new federal programs and educational policy has been insignificant.

Tiedt (1966) examined the history of federal aid to education and included an exposition of recent federal legislation. He presented arguments for and against federal aid and devoted considerable space to verbatim congressional testimony. The educational policies of the Kennedy and Johnson Administrations were presented through excerpts of addresses to Congress. Contents and bibliography give evidence of a thorough examination of sources and clear and comprehensible organization.

Tiedt (1966) devoted a chapter to the question of aid to private and parochial schools. A more thorough analysis is provided by Ward (1964) who examined state and federal court decisions and analyzed policy positions of competing organizations. Fuller (1966) viewed the increasing financial support of private and parochial education through recently

enacted federal legislation as a challenge to the First Amendment to the federal Constitution and a possible threat to the separation of church and state, the public schools, and a pluralistic society. According to Menacker (1966), the haphazard, piecemeal development of policy on educational support in the U.S. Congress is the result of organizational problems, conflicting political pressures, and the desire to achieve other national objectives through education rather than the desire to improve education. The American Association of School Administrators (1965) examined the history of federal aid and its relationships to local and state school programs and to school finance.

Keppel (1966) called for three revolutions of quantity, quality, and equality as the goals of public policy in education. He presented the case for his appeal by setting forth considerable numerical data from the U.S. Office of Education and by describing the growing partnership of local, state, and national governments in educational operations. The case for increased educational quantity as a goal of public policy, insofar as this gain in quantity contributes to the achievement of national prosperity, is receiving impressive support. Bowman (1966), in a review of recent economic thought, pointed out that although there are conflicts in research design and conclusions, the general consensus is that the rate of return on investment in increments of education has been higher than the rate of return on investments in physical capital. Studies of investment in education in economically developed countries have shown that the return on investment for the first eight years of schooling has been less than that for subsequent educational increments. On the other hand, Nam (1964) concluded that although the investment of federal funds through the GI Bill probably did not raise the educational attainment of veterans higher than would otherwise have been expected, the investment did represent a response to a growing demand for formal education.

Orlans (1963) and Wayson (1966) have examined the unintended consequences of federal programs on educational programs and policy. Orlans in his study of the effects of federal research programs at 36 leading universities and colleges concluded that in addition to achieving the intended results of expanding research programs and training more researchers, the sponsored programs also contributed to the devaluation of undergraduate teaching and the expansion of lower quality research. Wayson examined the impact of the 1965 education bills upon the politics of educational policy making. He sketched the outlines of changes occurring within federal agencies, at the interstate level through the Compact for Education, and at the state and local levels. He argued that these changes are being brought about by indirect controls, are irreversible, have long-range implications, are neither inherently good nor bad, and lead to power struggle. He stated further that states and localities will be variously affected depending upon previously established power relationships.

International Education

Johnson and Colligan (1965) in a thoroughly documented study described the origins, successes, and struggles of the Fulbright program, the federally sponsored international exchange of scholars. After describing in detail the program's various aspects and its continuation through the Fulbright Hays Act of 1961, the authors predicted continued strong support for it from governmental and private sources both in the United States and abroad. The federal government has further expressed a new and bold commitment to the broad area of international education in the International Education and Health Acts of 1966. Frankel (1966) summarized the impressive growth of exchange scholars, faculty, and students during the past decade and pointed up the powerful influence of international educational activities on the affairs of mankind.

Coleman and others (1965) analyzed the relevance of educational development for underdeveloped nations as well as for some (such as Russia, Japan, and the Philippines) which have relatively recently achieved a high level of educational development. The volume is a promising indication of exciting developments that can occur when educators and social scientists discover each other and overcome the traditional barriers separating academic disciplines. Wofford (1966), in a volume that presents a comprehensive view of the first five years' existence of the Peace Corps, asserted the success of the Corps as an experiment and called for its wider application. Although rigorous evaluation of such a far-flung and diverse enterprise is admittedly problematic, there is cited the testimony of returning Volunteers that their work has contributed to the economic and social development of the host country. The dramatic growth of the Peace Corps is seen in the rise of Volunteers from 120 in 3 countries in 1961 to over 10,000 in 46 countries in 1965. Calvert (1966) reported on the career status of the first 5,100 returning Volunteers and indicated that 16 percent are in the field of teaching. He reported that several states award teaching certificates to former Peace Corps teachers and others reduce their certification requirements.

Society and Education

Teacher Image: Role and Status

Gerbner (1966) explored the portrayal of teachers in mass media fiction and drama of the United States, Western Europe, Eastern Europe, and the Soviet Union. The characterization of teachers was compared to that of other adults and students. He found that in the Soviet Union and Eastern Europe teachers were portrayed as being more stable, purposeful, and higher in social and personal mobility. Teachers were also depicted more favorably, in comparison to students in the Soviet Union and in Eastern Europe, than in the United States and Western Europe. However, teacher

images were more alike than different across national cultures, with teachers presented as being aloof from life and interested in purpose and morality rather than in power.

Chu (1961) supported the position that teachers are more interested in morality and purpose than in power. When a sample of 259 school superintendents were asked how teachers' prestige could be raised, they rated professional dedication, ethics, teacher qualification, and public relations highly effective but gave no rating or only a slightly effective rating in the areas of strengthening teacher organizations, increasing teachers' voice in policy making, providing security, and campaigning for higher salaries and federal financial aid.

Colwell (1966) compared the reaction of 198 teachers and teacher training candidates to the image of "Mr. Novak." He found no difference between the two groups. In general they strongly identified with "Mr. Novak" as an ideal teacher but rejected the existence of the ideal in operation. Colwell inferred that the self-image of the teachers is negative and conforms to the traditional teacher stereotype. McCallon (1966) had 47 fifth- and sixth-grade teachers rate themselves, their most desirable students, and their least desirable students. He found that teachers perceived themselves on a level below that of their least desirable students.

Pavalko (1965), analyzing a sample of graduating high school seniors in Wisconsin, found that those who aspired to a teaching career tended to achieve a score, on the *Henmon-Nelson Test of Mental Ability*, higher than the average for the entire group. However, when the teaching aspirants were compared to those who planned to go to college, it was found that a teaching career had a higher level of appeal for lower socioeconomic status and rural students than for middle socioeconomic status and urban students and the teaching aspirants tended to obtain lower ability scores.

Bernard (1961), drawing upon a rich variety of systematic data, personal-documentary materials, and the insights of social theorists and novelists, has presented a coherent and provocative picture of the career patterns, problems of conflict arising from academic and "feminine" roles, scholarly productivity, and teaching performance of academic women. She also compared the academic careers of men and women. Among Bernard's many important contributions are her analysis of differences between the "fringe benefit" and full professional status careers of academic women, the documentation of the tendency of women to assume teaching as contrasted to scholarly roles, and her insights into the relationship of objective barriers to academic careers and self-imposed or learned dispositions which operate as effective barriers.

Restrictions of Freedom

A brief description of a highly publicized community crisis related to academic freedom is presented by the editors of *Life* (1964). The case of

Paradise, California, was then analyzed by several scholars in the same journal. Rogge (1961) in his insightful reaction to the case pointed up the complexities of an apparently simple situation, and McMurrin (1961) used the same occasion for a clear and strong statement on behalf of academic freedom in the public schools. The proceedings of the American Library Association Conference on Intellectual Freedom (1965) highlighted the current problems of academic freedom as they relate to libraries and the use of books in public schools.

Monypenny (1961) pointed up the fact that institutions of higher education have not yet agreed upon principles of academic freedom for students. Such freedom encompasses a comprehensive field, for the life of a student is more immersed in the institution than that of the faculty member. Jacobson (1961) described the facts giving rise to legal action in New York, wherein the appellate court upheld the right of college students to invite and hear a communist speaker on the campus of a state university. Murphy (1961), after examining the history of academic freedom, offered the opinion that such freedom will eventually be protected by the courts as a basic constitutional right.

Williamson and Cowan (1965), in a questionnaire study of 1,000 accredited four-year colleges and universities, sought to find out the nature of student freedom in institutions of higher education. A very high rate of returns of the instrument indicates the following: although student freedom is not universal, the great majority of college presidents urge open, free inquiry on campus; student publications are quite unrestricted; outside speakers of any dogma are allowed; and relevant policies are determined by discussion among students, faculty, and administration. The study pointed up significant regional differences as well as variations among different types of institutions. Fidler (1965) concluded, from the results of a questionnaire study, that the state of academic freedom in the South does not differ greatly from conditions in some other sections of the country. However, his descriptions depicted many shocking abridgments of such freedom, particularly as related to utterances and activities focused on racial integration.

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CHAPTER IV

Professional Organizations and Education

JANICE F. WEAVER

The first part of this chapter deals with research conducted by professional educational organizations and includes (a) selected significant trends in research, (b) a discussion of the continued increase in the number of organizations, and (c) problems accruing to that growth. The second part of the chapter discusses research on professional organizations in education and includes (a) the research centering upon professional negotiations in education, and (b) possible factors contributing to the relative lack of research about professional organizations in education.

Research Conducted by Professional Organizations

Significant Trends

One of the rapidly developing specialties in educational research under the aegis of professional organizations has been the expanded use of electronic data processes. The range of contributions during the three years under review has varied from simulations of personality by machine to much improved record keeping for schools. Tomkins and Messick (1963) have assembled the best source book for the contributions to personality theory through the use of computers. Other computer uses have been summarized in an excellent volume by Goodlad, O'Toole, and Tyler (1966). The authors have also provided a brief history of the new professional organizations growing out of this research specialty. One of these nonprofit organizations, the Educational Systems Corporation, initiated in 1964 a new publication called the *Journal of Educational Data*. Beginning in 1965, the familiar *Educational and Psychological Measurements* journal began to devote a section of each spring and autumn issue, under the editorship of Michael and Bjelke, to programs of electronic data and accounting machines appropriate to psychometric procedures.

The expanded use of machines in programmed instruction received impetus from exchange and cooperative programs of industrial research. One of the hundreds of conferences held to explore information and transfer systems for relocation and retrieval in school libraries was held at M.I.T. in 1965. Many state offices of education, such as the one in New Jersey, have set up special committees to investigate greater utilization of electronic data. A summary of the development of computer-based instruction was made by Dick (1965).

A second special area of research sponsored by organizations in education is the attempt to translate research into improved instructional practice. The best summaries of needs and efforts in planned or systematic changes in curricula and instruction are found in two monumental works: (a) Part II of the Sixty-Fifth Yearbook of the National Society for the Study of Education (1966), *The Changing American School*; and (b) *Innovation in Education*, edited by Miles (1964). The first part of the Yearbook reported aspects of the schools which have undergone or need change, and the second part contained discussions related to societal forces, to theory and research in instruction, and to some developments in the behavioral sciences to which the schools have responded. *Innovation in Education* resulted from the special project at the Horace Mann-Lincoln Institute. The massive volume related theoretical elements of change with reports of experimentation in an attempt to learn why some innovations spread rapidly or slowly, why there is resistance to change, and why some innovations succeed and others do not. Miles developed over 200 generalizations which gave coherence to the work.

The National Education Association (NEA) has continued its efforts as a disseminator of basic research. The temporary Project on Instruction resulted in a permanent Center for the Study of Instruction. According to the *Handbook* (NEA, 1965a) the Center's advisory committee, chaired by John I. Goodlad, decided upon three major directives for activity: (a) to develop, refine, and test curriculum and instructional research results; and (c) with those legally responsible for schools to use research results; and (c) to appraise and disseminate value judgments about new developments.

Additional References: Anderson (1966); Inlow (1966); Kerlinger (1961).

Growth of Organizations

The proliferation and spin-off of organizations with broad or specialized research concerns in education have been apparent. In addition to the over-200 institutional research bureaus of universities and schools reported in the *Directory of Educational Research Agencies and Studies* (1962) and in addition to the multiple departments and affiliates of the NEA, the *Encyclopedia of Associations* (1964) lists 78 professional education organizations whose stated purposes are to sponsor and conduct educational research. Nor do the above figures contain the private foundations, corporations, and the federal offices and bureaus having research interests.

The rapid growth of organizations and the increased research output have been caused, in part, by what Bloom (1966b) reported as a 2,000-percent increase in federal funding. The competition for federal funds, as an indication of increased research activity, compelled the American Educational Research Association (AERA) to prepare for its members a guide to federal research support programs.

Indicative of a similar increase by funding foundations were the three grants from the Charles F. Kettering Foundation for support of communication and dissemination research: (a) to AERA to sustain and promote evaluation of research publications, (b) to initiate an evaluation of ways in which educational research is disseminated, and (c) to Phi Delta Kappa to establish an educational information service.

Continued growth has complicated already existing problems for professional organizations, such as the problem of communication, and has perhaps contributed to what is an emerging problem, the ethics of research in education.

Problems in Organizational Research

Communication. Increasingly, the call for better ways of communicating has come from leaders of professional organizations. While serving as president of the AERA, Benjamin Bloom (1966a, b) made at least two published appeals for a network of communication and better dissemination procedures. In his presidential address, Bloom (1966a) made the following recommendations: (a) that there be developed "maps of the state of the field," (b) that ways of quickly communicating among researchers be developed, and (c) that newer research strategies should be utilized if the maps and communication network were provided.

Failure to develop ways of translating research into instructional models, as a result of lack of dissemination systems, was referred to by several respondents to charges made about educational research in a symposium held at the convention of the AERA and published in the *Harvard Educational Review* (Silberman and others, 1966).

The allocation of funds by the U.S. Office of Education in 1966 for the establishment of 20 Regional Educational Research Laboratories has been looked upon as one potential solution to the need for a network of communication. It follows another trend toward systematization of research efforts and the bringing of research closer to the practitioners in the field. The U.S. Office of Education also announced for November 1966 the monthly publication of abstracts and indices of research being sponsored by the Bureau of Research.

Additional Reference: Lumsdaine and May (1965).

Ethics of Research. In educational research, the problem of ethical behavior has been rare and primarily confined to propagandizing in the name of research. The NEA (1966a) made the distinction between research and propaganda in its comparison of salaries earned by NEA members and union members. For the distinction to have been made is commendable and indicative of what appears to be an overall improvement in the services and research of the NEA. That the distinction was made as a part of the new NEA Urban Research Series, however, indicated that the problem was not eliminated. The American Federation of Teachers, smaller and

less experienced in research services than the NEA, has shown concentration upon data in its recruitment of members.

It has been traditional to assume that loyalty to the ethical prescriptions of an organization precluded serious problems. Recently published discussions, however, have indicated that this assumption may no longer be valid. Page (1966) pointed to the need for guidelines for behavior expected of the professional educational researcher and suggested these principles: (a) loyalty to the profession should come before that to a client, (b) the researcher must take steps to safeguard the rights of subjects, and (c) proper credit for discoveries should be given. Millman (1966) considered Page's recommendations to be too general and suggested that specific answers be given to the following: (a) when should and should not a consultant receive a fee? (b) what expenses are properly included in a research project? (c) what positions in government-supported research can be held by persons who assist in evaluating such proposals? (d) what obligation does a researcher have to an employer when changing positions? and (e) when may a researcher receive pay for participating in research not as demanding as he is capable of producing? Millman related these problems to the fact that outside funds are more and more involved in the training and activities of educational researchers. He summarized his suggestions by agreeing with Page that persons who do not realize the need for some sort of guidelines are out of touch with today's research.

Additional Reference: Cranberg (1965).

Research on Professional Organizations

Professional Negotiations

The only significant research on the characteristics, activities, and personnel of professional organizations in education has been the extensive study of professional negotiations made by Lieberman and Moskow (1966). In their survey and analysis of negotiations conducted by the NEA and various unions (primarily the American Federation of Teachers), Lieberman and Moskow have raised pertinent questions about what negotiations are in the public interest and what sources might be used to develop guidelines for negotiations suitable to the peculiar position of teachers as public employees. One of the greatest services the book has provided is in its comprehensive bibliography. Included are appendices containing details of contracts, significant agreements, and state and federal legislation affecting negotiations. There is even a glossary providing some clarity for terms which are used frequently with different or multiple meanings or which have become loaded as a result of propaganda for or against teacher negotiations. Two pertinent publications appeared after the research for the Lieberman and Moskow book was completed. Taylor (1966) made an

interesting distinction between work stoppage and civil protest as they have become an American way of life, and the Research Division of the NEA (1965b) published a legal analysis and review of professional negotiations with school boards.

The NEA continued to be the biggest single source of data about teachers. *What Teachers Think* (1965c) summarized the results of teacher opinion polls about such things as ability grouping, teacher preparation, teachers and politics, and other issues. *Achievements and Services of the State Education Associations* (1964) summarized the legislative efforts and the securing of benefits for teachers by states. *Economic Status of Teachers in 1965-66* (1966b) included not only the median, average, and other salary figures, but also a comparison of teacher salaries with other professional groups.

Two volumes have come from the data in the original National Principalship Study, supported by a grant from the U.S. Office of Education--those of Gross and Herriott (1965) and Herriott and St. John (1966). These are primarily sociological studies of the characteristics of staff and leadership of public schools and the effect of socioeconomic status of students upon staffing in urban schools.

Conclusion

The tremendous growth in the number of professional organizations and the volume of research sponsored by them have complicated the already unsatisfactory procedures for communication among researchers and organizations and have enhanced the likelihood of potential unethical behavior among members of the profession. It would appear that this difficulty will continue until some representative body such as an interorganizational council undertakes a self-study following through on present evaluations being made of the means for disseminating educational research. The work of such a body, however, could not be very fruitful until there has been developed a set of criteria for determining what organizations, foundations, corporations, state, local, and federal governmental bureaus, etc., are to be a part of the network of participants. Such criteria for determining which organizations should be considered as responsible participants in educational research are lacking.

The need for definitive studies about the activities or interrelationships of professional organizations is more crucial than is realized. Had there been such studies, the self-study suggested above might not be necessary or at least could have been facilitated by such studies as those on (a) formal and informal power within and between organizations, (b) characteristics of the key roles of larger organizations and the presence or absence of "interlocking directors," (c) the length of time required in the larger organizations to disseminate a given piece of information from

top-down and bottom-up, and (d) the number of persons with multiple memberships in professional organizations.

It is unlikely that research on professional organizations will become more plentiful unless funding is arranged. The intent to fund, however, would be greatly hampered without some clarification of the division of labor involved in such research. Depending upon the use to which the results of studies were to pertain, research could be (a) historical, (b) comparative or descriptive, (c) sociological, and (d) evaluative. The welcome increase in the activity of behavioral scientists exploring educational processes could well perform needed services here. The understandable reluctance of educational researchers to indulge in self-study in their attempt to build theories of instruction and engage in basic research has left a number of research gaps, which hopefully the growing impetus and energy of educational research will fill.

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CHAPTER V

International and Comparative Education

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The knowledge explosion and its concomitant, the publication expansion, are no longer inappropriate factors for the serious student of international-comparative education. In fact, the introduction of new phrasing is germane to this issue of the REVIEW, where previously, for example, only so-called "comparative" studies were ostensibly included; many of them were actually of a more "international" dimension, although others today might more strictly fall into the category of so-called intercultural studies and still others could be more correctly subsumed as polycultural or cosmocultural monographs in education.** Many of the so-called monocountry or area studies have been heavily underpinned by comparative analysis through the involvement and training of the researchers or through the implications of their studies. Accordingly, this issue of the REVIEW must acknowledge the proliferation of comparative education publications since 1963 and, at the same time, give adequate recognition to many of the important international researches which provide the basic data and interpretation upon which comparative studies can be based.

It is germane to note a caveat with regard to the literature and research surveyed in this issue of the REVIEW. Much of the literature has both international and comparative connotations, and to include studies which by both title and content are obviously and singularly "comparative" would exclude a large number of studies which more strictly could also be subsumed under "area" or monocountry categories.

In the United States, the last three years have seen the proliferation of international educational conferences and resultant studies on the themes of comparative education. Much of the basic research in this field can be directly attributed to certain agencies and institutions and their members,

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** "The terms international education and comparative education are related but different in emphasis. International education connotes the various kinds of relationships, intellectual, cultural and educational, among individuals and groups of two or more nations. It refers also to the various methods of international cooperation, understanding and exchange. Comparative education is, on the other hand, the analysis of educational systems and problems in two or more national environments in terms of socio-political, economic cultural ideological contexts. Judgments are arrived at not for the purpose of determining which system, idea, or method is superior, but rather in order to understand the factors underlying similarities and differences in education in various countries. . . ." (From a forthcoming book by Stewart E. Fraser and William W. Brickman, *A History of International and Comparative Education*, Nineteenth Century Documents, to be published by Scott, Foresman and Co.)

notably, for example, the Comparative Education Society, the U.S. Office of Education, the National Association for Foreign Student Affairs, the Institute of International Education, and the international education research and teaching centers such as those at a small number of universities and colleges, e.g., Chicago, Stanford, Syracuse, Michigan, Indiana, Michigan State, Harvard, Pittsburgh, Columbia, and Peabody. International agencies responsible for conducting and disseminating research include the United Nations Educational, Scientific, and Cultural Organization (UNESCO), Paris and New York; Pan American Union, Washington, D.C.; the Organization for Economic Cooperation and Development (OECD), Paris; and the International Bureau of Education, Geneva.

The principal English language journals in the field still remain the *Comparative Education Review*, the *International Review of Education*, the *Foreign Education Digest*, and the *NAFSA Newsletter*. These have been joined by the new *Comparative Education*, *International Educational and Cultural Exchange*, *International Education Newsletter*, and the new journal of the National Pedagogic Institute in Paris, entitled *Repères*.

In addition, the following journals offer on a regular basis a significant portion of their publications for research studies on comparative education: *School and Society*, the *Phi Delta Kappan*, *Educational Forum*, *Soviet Education* (translation); and to mention a few overseas journals, *Minerva*, the *Student*, *International Student Conference*, *Teacher Education*, *La educación*, *Bildung und Erziehung*, the *Australian Journal of Education*, the *Jamia Education Quarterly*, the *Times Educational Supplement*, *L'actualité pédagogique à l'étranger*, *L'enfance dans le monde*, and *Evergreen: A Magazine of Chinese Youth and Students* (Peking). For the last five years the National Association for Foreign Student Affairs (NAFSA) and the Institute of International Education (IIE) have been responsible for publishing jointly an annual review of research edited by Stewart Fraser and Harold Epstein, representing NAFSA and IIE, respectively. The last review (Fraser and Epstein, 1966) noted over 112 research projects in the field of international and comparative educational research.

History

Brickman, the most prolific writer and researcher in the United States on the history of comparative education, produced a major bibliography of historical works in comparative education (1964b), a history of governmental interest in international higher education (1965a), and an account of the "prehistory" of comparative education up to the end of the eighteenth century (1966). Fraser (1966b) was responsible for resurrecting the century-old comparative and critical treatises of B. G. Northrop, State Secretary for Education in the 1870's in Connecticut. One of these, on the theme "Americanism Versus Communism, 1876" (Fraser, 1966a), now suggests earlier antecedents than the present decade for the popular

public school curriculum studies of democracy and communism. Northrop's other work contains one of the most extensive and clever comparative polemics against the indiscriminate education abroad of American youth. It is essentially the first major American treatise on comparative education of the nineteenth century and was written originally in 1873 when comparative and foreign perspectives were emerging as significant factors in the development of American higher education. The volume by Nash, Kazamias, and Perkinson (1965) is a major contribution to the history and philosophy of comparative education.

The Comparative Education series emanating from Teachers College, Columbia University, under the editorship of George Bereday, includes four major works concerning both the historical as well as the contemporary aspects of comparative education. Brickman's (1964a) major re-edition of John Dewey's writings on Soviet Russia, Mexico, China, and Turkey constitutes an important contribution of comparative material, not readily available in other form to students and researchers in the field. Passin's (1965) monograph on Japanese education is perhaps more properly an area study in comparative education. Nash's (1966) book on Matthew Arnold and his reaction and theories with regard to European education offers a judicious cross section of Arnold's comparative writings. Fraser's (1964) book on Jullien's 1816-17 plan for comparative education reproduced an original "primer" in this field on the first systematic and comparative study of education. The above four books represent major contributions to the historical study of international-comparative education.

Theory and Methodology

Bereday's (1964) book is a major work on the specific topic of research in comparative education and is a principal contribution to the science of the subject. The book lists many of the major contributors to the field of international-comparative education and is complemented by an extensive bibliography. The main emphasis is placed on area studies and the classification of basic educational data as a foundation for comparative studies. Holmes (1965) wrote a major work on applied and descriptive research in comparative education, its principal emphasis being on the problem approach to sociological factors. These works of Bereday and Holmes are among the most important written during the period under review on comparative education research methodology and are most useful as comparative education textbooks on theory and application.

Griffiths (1964) deals with the topic of educational planning as it relates to the conflict between means and objectives. Kazamias and Massialas (1965) were responsible for a sophisticated monograph on theories in comparative education as they relate to both tradition and social change. Their study warrants a strong recommendation as a supplementary textbook in comparative education.

General Works and Textbooks

A generally useful and popular textbook in comparative education is Cramer and Browne's (1965) *Contemporary Education*, which has been thoroughly revised from the 1956 edition. It is divided into four parts dealing with basic cultural factors, administration, school systems, and educational developments in Japan, Communist China, and India. Thul and Adams (1964) contributed a major work, *Educational Patterns in Contemporary Societies*, divided into three main parts dealing with Western patterns, Oriental patterns, and newly emerging patterns. Adams (1966) contributed a book of readings in comparative education, as did Hanson and Brembeck (1966) in their extensive work dealing with education as it relates to the social, economic, and political development of nations. Their book includes some 17 essays written by a number of prominent authors. Brembeck's (1966) book deals with basic sociological problems in a comparative framework. Coleman (1965) edited a symposium on the relationships between education and political developments, and Moehlman (1964) wrote a basic and compact work on comparative education, dealing with educational systems as they can be described and classified according to the main forms represented in the different countries.

Reference Works

The fourth volume of *World Survey of Education* (UNESCO, 1966b) deals with higher education in the same way previous volumes have dealt with primary and secondary education. Thus, the originally planned cycle of study and research has been completed, stretching over more than a decade. This publication series continues to be the major reference on world education, the fourth volume including descriptions of higher education in some 200 countries and territories and a summary of each nation's school system. Contributing greatly to the quality of the series are the highly standardized procedures, good presentation of statistics, and uniform pattern of descriptions for the various school systems.

The *UNESCO Handbook of International Exchanges* (1965) contains information on the activities of 272 international organizations. Of the various UNESCO publications of this nature, this volume is probably the most useful reference work. The book is divided into three main sections: (a) introductory articles; (b) international organizations, their aims and activities; and (c) national organizations and activities. As indicated in the book's introduction, the volume is intended principally for academic, institutional, and governmental use and has taken two years in preparation. UNESCO (1966a) published its sixteenth edition of a guide to study abroad, which was written in English, French, and Spanish. It contains information on over 170,000 opportunities for travel and study abroad. UNESCO and IAU (1965a) published a series of national studies on

university admissions in a selected number of countries. This is not only a useful source of information for students planning to study abroad but also a good general source of comparative information on higher education in the countries involved.

The Council for Cultural Cooperation of the Council of Europe (1965) published a reference work which is intended to be a guideline of basic information and statistics on the school systems of some 20 different European countries. Although the book has the appearance of being carefully prepared, some errors have crept in; however, this volume must be considered a major contribution to a standardized classification of educational data.

Collection of Papers

Some of the books that contain collections of papers have been dealt with under other headings as they have related more directly to other research categories in this review. French (1964a, b: 1965) edited a particularly fine selection of papers for the Melbourne University Studies in Education. The books deal specifically with the history and administration of Australian schools and education abroad. Fraser (1965b) published 18 papers presented at a symposium held at the International Center, George Peabody College for Teachers, in 1964. The book compares the roles various governments play in encouraging and directing international education and was sponsored by Phi Delta Kappa, the National Association for Foreign Student Affairs, and the Comparative Education Society. The papers are grouped into four main sections: general survey and background studies, international studies, communist education, and area studies. An extensive bibliography complements the collection.

Yearbooks

The World Yearbook of Education, 1965: The Education Explosion (Bereday and Lauwerys, 1965) contains a selection of essays written by 30 prominent educators. There are 13 theoretical and comparative essays written with regard to the problem of a rising worldwide demand for education. The other essays deal with general topics of a wide range drawn from different countries. *The World of Learning, 1965-66* (1966) is a major reference source of educational information and now includes much needed and useful information on the developing countries. The arrangement of categorized information has been greatly improved when compared to previous editions. *Paedagogica Europaea, 1965: The European Yearbook of Educational Research* contains a collection of some 13 major articles written either in English, French, or German, and followed by a summary in the other two languages. It also includes important reports from OECD, the Council of Europe, UNESCO, and various European governmental organizations. Annually, the International Bureau of

Education (IBE) in Geneva publishes *The International Yearbook of Education* which affords up-to-date comparative data on educational systems throughout the world. These IBE yearbooks are an important source of comparative information, even though the serious research student of international and comparative education must be aware of the uncritical nature of the information presented. The IBE also produces a major contribution specifically on comparative education in its ad hoc series of publications.

Area Studies

By far the largest category of studies pertaining directly to comparative education deals with specific areas, or specific problems within an area, or comparative studies on problems within two or more countries and or related countries. The reviewer has included, however, only certain selected representative areas to illustrate recent educational research in international or comparative terms. The areas selected are not exhaustive and represent only some of the more important ones of interest to educators.

Africa

During the period under review, the publication of detailed and comprehensive books on African education increased. The availability of such works is gratifying, as the topic of African education, per se, has shown only a modest growth rate during the past decade. There are few portions of Africa still remaining under colonial control today, and it is understandable why there has at last been an increase in comparative education treatises and research monographs. Among the general works on African education should be noted those by Burns (1965), Busia (1964), Castle (1966), Greenough (1966), Larsen (1961), and Scanlon (1961). The work by Scanlon is of particular importance as it is representative of the better pan-African and inter-African comparative studies in education. Scanlon notes the diversity of cultures which are set against a diversity of inheritance patterns due to the various colonial backgrounds imposed upon Africans. The present African leaders in education are faced with adapting these diverse European educational strains to meet their own individual country's requirements. The Belgian, British, French, and German systems of colonial education are clearly analyzed. A work also of major importance was compiled by Ashby (1961) on higher education in Africa and the impact of European society and culture. The West African universities in Ghana and Nigeria were singled out for inspection in order to illustrate the African capacity for adoption and adaptation. UNESCO (1964) published a work dealing with the instruction of science in African universities. It is the report of a seminar dealing with basic science teaching in African institutions and includes a useful selection of basic but supplementary documents.

Cowan, O'Connell, and Scanlon (1965) produced the major work to date on African education and concentrated on the theme of "Education and Nation Building." Of principal interest are the sections on education in Africa in general—underpinned with a selection of documents from UNESCO and other similar agencies—and individual sections on East, Central, and West Africa, and on some 11 individual countries.

A number of well-documented articles were written on the comparative or pan-African problems of education: McLean and McLean (1964) on medical education, White (1964) on curricula in African schools, Osborne (1964) on the teaching of physics in African universities, Rose (1965) on Bantu education and South Africa, Jordan (1965) on apartheid and South African student refugees, and Rimmington (1965) on the development of higher education. A major source of information on African education is Yates's (1961a, b) general bibliographies.

Asia

The comparative study of education in Asian and related regional areas has been of increasing interest to educators, political scientists, and economic planners, as exemplified by Silcock's work (1964) on higher education in Southeast Asia and Fischer's (1964) comparative study of developing universities also on the same region. Huq (1965) wrote on educational planning as it related to educational development in Southeast Asia. His book was the result of studies undertaken at the East-West Center, Hawaii, and exemplified the so-called "Karachi Plan" for planned educational expansion of underdeveloped and underfinanced areas of South Asia. UNESCO and IAU (1965b) were also responsible for a summary report on the development of higher education on the same region.

Among studies devoted to a single country were those by Lipkin (1964) on teacher training in India, Lux (1964) on technical educational problems of India, Wood (1964) on educational planning in Nepal, Samonte (1965) on an analysis of public schools in the Philippines, Hunt and McHale (1965) on economic development and Philippine education, and Fischer (1965) on a comparative study on education and political developments in Burma and Indonesia. Area studies of major importance for both comparative purposes and developmental education are these: M. Clark (1965), education of Chinese minorities in Indonesia; and Curle (1966), educational problems, cultural conflicts, and planning in Pakistan.

The Soviet Bloc

Recent research studies, both books and articles, on this topic tend to be mononational studies rather than of a pancommunistic or of a comparative nature. However, a major study of the entire communistic bloc includ-

ing China but excluding North Korea and North Vietnam was edited by Roucek and Lottich (1961), who treated communist education from the dual aspects of nationalism and Marxist ideology. With regard to the Soviet Union, Apanasewicz and Rosen (1961) compiled an excellent bibliographical guide which concentrated on works in English on all aspects of education in the Soviet Union and which included some 281 individual titles under 78 subject categories. Rudman's (1961) study, also under the auspices of the U.S. Office of Education, concentrated on the problems of educational structure and decision making in the Soviet Union. The Institute for International Youth Affairs (1961) published, in the *Facts on Travel Series*, general information on education in Czechoslovakia, Hungary, Poland, and the Soviet Union. One of the most satisfactory, comprehensive, but succinct books written on Soviet education is by Grant (1961). Unlike previous works on a similar topic, whose bulk and detail tend to discourage the nonspecialist, Grant's work is ideal as a traveling companion to educators visiting Russia. Rosen (1965) is responsible for much of the encouraging U.S. Office of Education's extensive series of research studies on Soviet education, as exemplified in a variety of recent monographs on significant aspects of that country's educational system.

The range, intensity, and quality of periodical literature, particularly in the English language, on Soviet education has not abated during the period under review. But instead of continuing the outright comparisons—many of a chauvinistic nature—of previous years, the current literature exhibits greater research in depth and more modest comparative overtones. The pioneers in acceptable and well-founded research in the past on Soviet education have been Bereday, Brickman, DeWitt, and Medlin, to name but a few from the United States. They are, of course, matched ably by Anweiler of Germany and by Grant, King, and Holmes of Great Britain. Their research techniques and application of comparative methodology have borne fruit, and more of their trainees and colleagues are joining the ranks of those studying the changing nature of communist education in Eastern Europe. The greater variety of articles written specifically on Soviet education may indicate a continuing but perhaps only a moderately increasing interest in educational achievements and problems.

Communist China

The availability in the United States of research in depth on Chinese education has lagged considerably behind the research studies on the Soviet Union. The principal researchers during the past decade were Barendsen, Chen, Cheng, Hu, and Orleans. There have been two recent education and manpower studies on China. Cheng's (1965) study on the availability of scientific and engineering manpower during the period 1949-63 was backed by extensive statistical information supplemented

by a related documentary collection. Fraser (1965a) was responsible also for a special collection of documents on Chinese communist education and political developments which occurred during the regime's first decade. It was preceded by an extensive and interpretative analysis and followed by a detailed bibliography and specialized index of over 120 pages.

Barendsen has been responsible for the important and carefully planned monograph research series on Communist China emanating from the U.S. Office of Education. In addition to the numerous papers and research pamphlets he has produced on Chinese education since 1963, he also edits and assists in the research of other scholars such as Chen and Harper who write for the Office of Education. Included in these studies should be Barendsen's (1964) work on half-work, half-study schools, and Harper's (1964) study on adult and part-time education.

Western Europe

Yearbooks and regional studies mentioned earlier make up much of the recent literature on Western Europe as a whole, e.g., *Paedagogica Europaea* 1965, Vol. I. Among the more interesting articles of a research nature on Western European education are those by Seif (1965) on the teaching of modern languages in Belgium, England, Holland, and Germany; Pinner (1964) on the topic of student trade unionism in France, Belgium, and Holland; Fahmy (1965) on technical education; Anderson (1965) on geographic and economic factors affecting European education; Halsall (1966) on European comparisons of intelligence in school and social contexts; and Peck (1966) on the relation of Irish education and its European integration.

The literature, both book and periodical, is abundant on individual countries, and a representative sample from several West European countries of special interest to comparative educators is listed below:

Great Britain. Books to be noted are those by Reed (1964) on the traditional schools of Britain, Phillips (1965) on specific social problems relating to education, and Wilkinson (1964) on the leadership in Britain and the public school tradition in that country. Gross (1965) wrote and edited an extensive work on secondary education in Britain. It includes a series of research essays by distinguished British educators and allows transatlantic comparisons as well as those between the parts of Britain. Among the considerable number of major research articles dealing with the comparative aspects of British education, the following should be of special interest: Hutton (1964) on teacher education, Hanky (1964) on independent schools in Britain, Maclure (1964) on developments in higher education in Britain, Belding (1964) on secondary school problems in Britain, Kirk (1965) on the education of slum children in London, and G. Hansen (1965) on the myths and realities of "separate but equal" English secondary education.

France. The major comparative, constructive, and succinct synthesis of research on education in France can be found in Halls's (1965) study of the schools and society of that nation. A number of important articles have also appeared which deal effectively and efficiently with French education, notably those of Halls (1961) on educational planning and industrialism, W. Fraser (1961) on progress and developments in French school reforms, Capelle (1965) on the orientation and guidance cycle in French secondary schools, and Worms (1966) on the French student movement.

West Germany. Research studies include that of Edding (1963) whose re-search and views are of major interest to comparative educators and can be utilized in an overall comparative European framework. The general periodicals and articles on research topics concerning West German education include those of Springer (1965) on the influence of *Bildungspolitik* in educational planning, Hahn (1965) on teacher training and also on higher education and West German universities, Hetzer (1965) on universities and an analysis of their present crisis and traditions, and Edding (1965) on university enrollment.

Other European Countries

A noteworthy study on Scandinavia was made by Dixon (1965) on the educational systems of Norway, Denmark, and Sweden. Articles of a comparative nature would include Kulich (1961) on the Danish folk high school, Toman (1965) on Finnish school reforms, L. Hansen (1964) on Norwegian school reforms, Husén (1965) on Swedish school reforms, Brickman (1965b) on the influence of Danish education and culture, Canfield (1965) on a comparative analysis of Danish Swedish folk high schools, and Stenhouse (1965) on comparative education in Norway. Paulston (1966) offered a major research tool through his extensive bibliography on the Swedish comprehensive school reforms. A general notation of other comparative education research studies in the countries of Europe not already mentioned would include the following: Dudley (1961) on international schools in Vienna, Atkinson (1964) on the school system of Ireland, A. Clark (1965) on changes and developments in Spanish secondary education, Margaritis (1961) on higher education in Greece, and Maas (1961) on the Mammoth Law and Dutch educational reforms.

Latin America

The development of research programs and the expansion of field studies in Latin America, especially by U.S. researchers in collaboration with Latin American scholars, are most promising. This is excellently exemplified by both various area and mononational studies. The extensive

wider range of research monographs which certainly qualify as comparative education studies. Various new journals and even new publication series specifically catering to international-comparative education have emerged. A greater sophistication of research techniques is noted. The blurring of divisional lines between studies in the fields of "international educational exchange," "developmental education," and "intercultural education" is perhaps symptomatic of the expansion of interdisciplinary studies. It is appropriate, therefore, to note that already research conferences by interested institutions are being planned for 1967 and 1968 which may at least redefine the overlapping fields of interest and perhaps even suggest jurisdictional lines of responsibility. The scope and direction of material already reviewed in this article will suggest a variety of special philosophical connotations for comparative educators.

One of the points of interest which should be made regarding the literature under review concerns its applicability. There are few recent comparative education research studies which have to date illustrated that their analysis or "message" has directly influenced governmental policy or even public opinion. Many of the comparative studies have been, however, the basis on which professional educators and public officials have framed new policies and even undertaken educational innovations. This is perhaps most clearly illustrated by the variety of excellent source materials being produced under the auspices of the U.S. House of Representatives Committee on Education and Labor. The Task Force on International Education under the chairmanship of John Brademas has assembled material of particular importance for comparative educators in evaluating the role of the United States vis-à-vis that of other nations in the field of international education. The International Education Act of 1966 owes much to the various philosophies clearly enunciated in the various research papers and background provided for the use of Congress. The Act, if funded adequately, will undoubtedly allow for a most spectacular expansion of area studies and comparative education research centers in the United States.

The misuse, or even abuse, of comparative education studies appears to be partially on the wane, and certainly there seems to be modification of the excessive comparative studies of American and Russian education. But this does not mean that we will be saved in the future from chauvinistic and vitriolic comparative education studies on, for example, India and Pakistan or between Russia and China. The trend has been for the undertaking of an increasing number of "regional problem" studies. Thus, research topics such as the "teaching of physics in African universities," or the "sex education of European children" may be of greater importance to comparative educators. They are now involved more and more in both "adaptive" and "adoptive" educational studies and resultant techniques and are often propounding "contrasting" rather than "comparative" education to their students and colleagues. The "multinational team" approach

to common educational problems is increasingly occupying the attention of comparative educators.

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CHAPTER VI

Sociology of Education

WILLIAM M. CAVE and DONALD L. HALSTED

The selection of material for this review reflects the judgment of the reviewers concerning the appropriateness and significance of the books and articles of which we were cognizant. In general, the studies included were restricted to actual research reports centrally concerned with the school and its processes and confined primarily to the American society. If one examines many journals dealing with educational problems, he will find a considerable number of essays, exhortations, and programmatic statements. These statements undoubtedly serve a function, but whether that function promotes valid understanding of the school and its role is questionable. Another type of work not reviewed here is a general review of areas of research. Such reviews are valuable, but unless some original research was part of the review it was not included.

This review will, for the most part, ignore the comparative studies of the American school and various foreign systems. The insight derived from such studies may be considerable, but it might fit under other categories more readily. A final limitation was to restrict the review to studies dealing directly with the school as an institution. This restriction excludes studies which use school populations only as a ready source of subjects: only in those instances where an aspect of the school population was used that might be generalized to other school populations was the study included. A related restriction was applied to studies using variables that *might* affect school relationships but were not specifically tested in relation to school characteristics. Examples of this type are the sociometric and social class studies which abound in the literature. Undoubtedly, studies dealing with such variables as sociometry and social class have school relevance; however, if the study did not deal directly with the relation of variables and the school system, the article was ignored.

The following review does not attempt to analyze critically all aspects of the studies. Their inclusion here indicates that a reasonable design was evident and conclusions were based on data presented. Some studies dealing with small samples were included because numerous studies along similar lines with similar findings indicate a finding of some generality. The inclusion of a study thus hopefully indicates a reasonable contribution to understanding the school from a sociological point of view. However, inclusion here does not mean that the studies are above criticism.

The studies selected for review may be divided into two main categories of (a) social system considerations and (b) the impact or contribution of "outside" variables. This taxonomy is intended to convey the main orienta-

tion of the study and does not imply independence of the variables involved in other studies reported.

Social Systems Aspects

School personnel have attempted many studies and procedures with varying degrees of success. One attempt at restricting the traditional school has been the grouping of students around basic areas of learning as opposed to the final division of the traditional curriculum. Forlano (1964) found that an important social result is greater peer acceptance in "core" as opposed to "noncore" courses. It should be noted that no significant difference in peer acceptance was noted until the program had been in effect two years. This finding is a subtle reminder that effects of educational structure may be visible only over relatively long periods of time. Another argument over school structure concerns the impact of ability grouping. A study by Deitrich (1961) may be cited by adherents of various positions. Using two school systems, he found that the studies of relationship seemed to be little affected by ability grouping. Where heterogeneous grouping was used, the students tended to group by ability levels anyway. In addition, problems cited by the school were similar regardless of the grouping process. Some readers will be unhappy over the definition of problems, pointing out that some impact of grouping was not included. However, this study is important in revealing that ability grouping may not be as advantageous or as damaging as partisans may claim. A study of interest to administrators concerned with extended school systems was done by Sicuro (1965). This study indicated the relationship between student characteristics and attendance at the central campus and a branch campus. The central campus students showed better aptitudes than off-campus students but actual achievement and values appeared about the same. The author was not arguing that structure alone determines differences and pointed out that off-campus students tended to have lower social class backgrounds, financial difficulties, and parents who had a lower level of educational attainment as compared with students on the main campus. In addition, off-campus centers had more males than females, a reverse of the main campus pattern. The study did not indicate any clear advantages or disadvantages regarding attendance at these locations. Follow-up studies along this line showing careful concern to interaction of various factors on campuses would be fruitful.

Margolin (1964) found that knowledge of rules and their criteria was positively correlated with the amount of structure in the classroom. In addition, children in low structured classrooms were less apt to be persuaded to join peers in doing something against their will. Children are not alone in being influenced by the structure of the school. Soles (1961) found that the teacher's choice of role model was related to the type of school structure. In schools where they were with students over multiple

periods, teachers tended toward a group development model. In the one-period teacher schools, the teacher tended to choose the technical-self-sufficient model. Two models not significantly different in rates chosen were the impersonal bureaucratic and the counseling guidance model. The administrator must not only be concerned with the impact of structure on the role of teachers but also deal with the problem of burgeoning special service departments. Characteristically, these departments have served in an advisory role to the office of administrators.

Some sociologists have questioned whether social class has the determinant effect found in earlier studies in a modern urban setting where family status is not directly observable. The next two studies tend to support this proposition. McDill and Coleman (1963, 1965) have written two excellent articles based on an analysis of data from some of the same schools Coleman used in an earlier book. The authors in one article (1963) explored the relationships of social status, college plans, and interest in academic achievement and found them to be complex. They did obtain a positive correlation between social status and interest in college attendance but a negative relation between achievement orientation and social status. This seems to be a product of college plans helping place a person in the leading crowds but with a high achievement orientation influencing placement into less than a leading crowd. Examining freshman groups, the authors found for the low status group a positive relation between high achievement orientation and interest in college; in the high status group no such relationship is found. These findings point out the necessity of more exploration of the peer society operating within the institutional setting of the school. McDill and Coleman (1965) emphasized this need by their data in the second article. They indicated that status in high schools may be a more important factor in explaining college plans of students than parents' educational attainment. The above studies underscore the need for more empirical research investigating the latent as well as the manifest consequences of the school structure. The accurate assessment of school and nonschool influences on learning and personal development would seem highly important in evaluating the school's role in American society.

Teacher-student relations have long been a concern of educational sociologists. One interesting study was reported by Smith and Lutz (1964), who used the classifications of "respect," "liking," and "considerateness." They found that considerate behavior was related to respect but not to liking, although the teachers rated highest in respect and liking were also rated highest in consideration. They also found that teachers who pushed toward formal goals were respected but not liked. High respect/low liking teachers had the greatest movement toward formal goals; the low respect/high liking teachers had the lowest movement toward formal goals. These findings raise questions about the cultural value placed on education and what support students may get for this attitudinal development. In a study

that appears consistent with the above. Nelson (1961) investigated the affective and cognitive attitude of junior high school teachers and pupils. Using paper-and-pencil tests, Nelson found that teachers preferred cognitive students and students preferred affective teachers. To the extent that these qualities are antithetical, problems in the schools will be considerable. It may be more fruitful to explore the development of a situation in which the teacher may be both affective and cognitive and highly desired by the pupils. The age of the students in a junior high may indicate the lack of appropriate development to handle formal structure. The next study indicates that such development may take place before professional school age. In a most intriguing study, Quarantelli, Helfrich, and Yutsy (1964) studied the impact of a professional school on the socialization of students. They investigated the proposition that professional schools stamp students alike because of conforming norms and the use of professors as role models. They measured freshmen entering the professional school and retested them as sophomores. By comparing shifts in value positions, they estimated the influence of the impact of the school. Their data indicated that the school does not socialize to a significant degree. The shifts in values from freshman to sophomore years were away from the professor's position. It does seem that there is a preschool selection in that the freshmen are already quite similar to the professors. The authors concluded that the data do not support the role of the faculty as a significant other.

There are some studies that do not seem to fit the above subcategory but merit attention. The first, by Wallen (1964), failed to find any difference in pupil performance when the source of incentive was the teacher, the individual, or the group. Inasmuch as the study was based on 19 classrooms, the study cannot be ignored. There may be some questions as to how convincing the students that the individual or group was "really" offering the incentive. But unless some criticism in this line is involved, the study stands as a negative case in the area of group dynamics. Wallace (1964) found that socialization patterns among college freshmen were related to grade aspiration. The more freshmen socialized with nonfreshmen, the lower was their expectation of receiving high grades. The explanation of this relationship is problematic, with many variables to be explored. However, the study should be followed up, to indicate, for example, whether this pattern is better for reality orientation or lower aspirations leading to lower grades. Boyle (1966) reviewed some previous work and presented some new data from Canada concerning the import of the high school on student aspirations. He noted that location and composition of the community are related to student aspiration, but he did not believe that all of the effect could be traced to that source. There do appear to be differences among schools in developing talent. Boyle pointed out that more explanations of peer culture seem to be necessary and reiterated that social class values and occupation of the father do not provide explanations for variations in schools.

From another perspective the school may be approached in terms of organizational theory. This procedure highlights the interrelationships of numerous variables. The most noteworthy work dealing with an attempt to cast the sociology of education in the context of organizational theory is Corwin's (1965) volume, *A Sociology of Education*. Viewing school systems as complex bureaucratic organizations, the author attempted to build this perspective through the application of the concepts of class, status, and power. While admittedly drawing heavily on the literature dealing with complex organizations, Corwin called attention to the need for research on the organizational structure of urban school systems.

Impact of Outside Variables

The concern of this section is with the impact of extraneous variables as they influence the role of the school. These variables tend to derive their significance by limiting in various manners the impact the school may have on its students. It is often impossible to separate the impact of these variables and the structure of the school because the school structure is highly influenced by these factors. Social class tends to be a variable of this character.

Few areas of sociological inquiry have influenced the pattern of educational research as have those involving the concept of social class. The saliency of the social class variable has been noted in numerous studies predicting such phenomena as student achievement, expectations, aspirations, and behavior. The overwhelming majority of these studies have treated social class as an independent variable. However, a recent study by Herriott and St. John (1966) attempted to investigate the impact of pupil background on teachers and principals and demonstrated the research value of viewing social class as a conditional variable. Reporting the results of a national study of 190 schools in 41 large cities, the authors offered data indicating that the performance of the principal is more closely related to that of his teachers in schools classified as low in socioeconomic status rather than those of high status. In focusing on educational variables that may be related to the socioeconomic status of the clients (or students) of educational organizations, the authors have made an important contribution to the design of research projects investigating the relationships between education and social stratification.

A surprising finding is reported by Edmonds (1964) concerning the differences in verbal activity. He did not find significant statistical differences in verbal ability in the sexes: indeed, the boys in his highest class were slightly higher in ability than girls in his highest class. All of his classes were located in a very depressed area, however, and should not be interpreted as being equivalent to societal classes. Peisach's (1965) results support the concern over the influence of social class on the educational process. Peisach found that middle class pupils were better in understand-

ing teachers' speech than were lower class pupils but that this variation disappeared when IQ was controlled. There were significant status differences in understanding peer group speech even with the IQ controlled. Both lower and middle class groups understood lower class speech, but the middle class was better on middle class speech than was the lower class. This finding indicates that peers might not be good formal educators when using middle class speech patterns, which in turn might have sociometric implications. Eckland (1961) indicated that social class background is even more pervasive an influence than was currently thought. In studying college graduates he found most social class indices significantly related to college graduation when the concept of college graduation was extended beyond a four-year limit. By defining college graduates as all those who eventually obtain a degree, he found social class to be a highly relevant variable in contrast to other studies of college graduates. Whether this relationship will be as strong in the future will be interesting to test, given the apparent shifts found in high school studies reported earlier in this review. Eckland's findings take on more significance when the next study, also by Eckland (1965), is examined. His findings indicated that college graduation is important as a requirement for high status jobs. Lower status people who graduate do well, proportionately, in obtaining high status positions; however, social class is still an important variable because high status people who do not graduate still tend to get medium status jobs. These findings support the contentions that class is still an important variable in social life and that the school is not the only source of job allocation.

Another factor that may be changing in impact is racial segregation. St. John (1964) reported that in one city the Negro and white students participated equally in extracurricular activities, although there were some differences in type of activities. There were equal rates in holding of offices, but again some different activities were involved. The data showed that preference for one's own racial group is strong but decreases as the association becomes less intimate. The Negroes showed more self-preference than the whites. The impact of "white backlash" on the above findings would be a worthwhile study.

There are several studies that seem worthy of reporting but are difficult to classify within our taxonomy. Bressler and Westoff (1963) pointed out that the previously accepted relationship of Catholicism and worldly success may be changing. When they took men at the same stage of life, they found no statistical difference between Catholics and non-Catholics on income, occupational status, or mobility. There is some question about how religious some of the samples may be, but the finding does indicate that simple relationships between group characteristics and behavior may not exist in modern society. Brookover, Thomas, and Paterson (1964) reported the significance of self-concept as a variable in school achievement. Even when IQ was controlled, self-concept was related to achievement.

The importance of others in developing self-concept is supported by the finding that a composite image of what the subject sees others as perceiving in him is most closely related to his own self-concept. The relation of self-concept in interaction with school class structure and other variables should be of prime interest to educators of the future.

The role of education as an agent of social change has received considerable attention. Federally supported programs aimed at improving the living conditions of slum area residents and raising the educational levels of "inner city" children and adults have assumed the school's role to be one of leadership in helping to bring about constructive changes. The United States' investment in the underdeveloped nations is also characterized by educational programs designed to facilitate sociocultural change and hasten the modernization process. Although a wealth of descriptive materials concerning the organization, administration, and implementation of such efforts is readily available, there is limited research indicating conditions under which education does, in fact, act as an agent of social change. Evaluations of such programs are practically nonexistent. From a cross-cultural perspective, Medlin, Carpenter, and Cave (1965) completed a field study in the Soviet minority republic of Uzbekistan which was designed to investigate the role of education in bringing about social change in a technically developing society. The findings indicated that the Soviets had brought about remarkable social changes in this central Asian republic in a relatively short period of time. The authors cited the school as the principal agency of acculturation as well as the perpetuator of non-threatening native value systems. They pointed out the centrality of the learning model as pervasive in the culture, with the school assuming an active role as an agency of change. Findings reported by Kazamias and Massialas (1965) in a study of tradition and change in education indicate that formal education does play an integral part in modernization but that the forces of tradition have also acted as countervailing influences.

Conclusion

This review has attempted to accomplish two objectives: (a) to provide the reader an acquaintance with the current status of research in selected areas of the sociology of education, and (b) to indicate the relative importance of research findings in these areas as they may contribute to a deeper understanding of the external and internal dynamics of the institution of education.

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CHAPTER VII

Anthropology and Education

HARRY F. WOLCOTT

"Whatever it is, it is *not* anthropology," commented an anthropologist in reference to a recent book clearly within the purview of this summary. His opinion was not intended derogatorily: it is cited because it suggests the central issue in delimiting the literature of "Anthropology and Education." Since it is impossible to characterize the vast literature of education, the characteristic of recent literature selected for this review must be its anthropological perspective. What are the criteria which characterize this perspective? Addressing himself to his anthropological colleagues, Smith (1961) distinguished two contrasting audiences for the literature of anthropology: peers and patrons. Research studies, he maintained, are written for peers, i.e., other anthropologists. Popular accounts are written for patron groups and are generally written for a specific audience, such as students, the public, or professionals in other fields (e.g., doctors, sociologists, educators). In contrasting the orientation which anthropologists take in writing for their peers with that for their patrons, Smith used a series of paired statements which can be paraphrased as follows, citing first the behavior of anthropologists writing for their peers: (a) regarding other cultures for their own sake vs. presenting cultural alternatives to the patron's own way of life; (b) analyzing the constants and variables between cultures vs. emphasizing the uniqueness or differences of each culture; (c) presenting a maximum amount of data ("if there is enough information it will explain itself") vs. assuming that patrons "prefer a high ratio of explanation to information"; (d) giving explanations in terms of causes—the relation of the past to the present—vs. "value-oriented formulations and goal-directed explanations" suggestive of a concern for good and better with a perspective that the future determines the present; (e) emphasizing a uniquely anthropological approach to cultural analyses vs. attempting to identify anthropology with sociology and psychology; and (f) contrasting between providing peers with technical analyses of subsistence patterns, kinship systems, or material culture vs. satisfying the patrons with broad, aesthetically satisfying concepts rather than discrete conclusions warranted by scientific evidence.

An anthropologist reviewing a text written for students in an introductory course in anthropology—one of the patron groups—wryly observed that while anthropologists write introductory texts they do not read them. The same condition probably holds for the literature in "Anthropology and Education." The few anthropologists who do focus attention on formal education are not writing for their peers: they are writing to a highly

receptive audience of patrons, the professional educators. The audience is so receptive and the number of anthropologists so few that the field is beset by many problems. For example, anthropologists do not always organize their manuscripts with the same care they would be expected to employ if writing for their peers (see Landes, 1965): they seldom accord to teacher or administrator subjects the same uncritical or sympathetic treatment accorded to parents or pupils—particularly ethnically different ones; and frequently they do not use the same time-consuming methodologies for gathering data they would employ in any other setting. Often they do not gather any data at all, but they merely reminisce before their educator audiences. They may fail to identify for their patrons those conclusions which are not based on their endeavors as anthropologists, as, for example, Montagu's conclusion (1961) that the educator's task is to "join knowledge to loving-kindness in himself and in his pupils." Further, because of the popularity of analyzing educational problems and settings from a cultural perspective, many nonanthropologists are contributing to the field, writing about culturally relevant dimensions of behavior but frequently without anthropological convictions, commitments, or competencies. It is not surprising that educators have attempted to establish a liaison with anthropology by augmenting the efforts of the few interested anthropologists: occasionally their contributions are excellent, but sometimes their enthusiasm masks a very dilettante anthropology (see Kneller, 1965).

The result of these conditions is a very uneven body of literature. The "tenuous relationship" between anthropology and education noted by Brameld and Sullivan (1961) when they wrote the first review of the literature for this journal six years ago has not undergone marked change. There are some excellent recent contributions, however, particularly in the area where education and anthropology merge to explore education as a cultural process. In this regard the efforts of Spindler and Spindler (1967) are particularly noteworthy. The Spindlers have launched a new series (comparable to their highly successful *Case Studies in Cultural Anthropology*) providing case studies of the educational process in a variety of cultural settings, each written by an anthropologist or anthropologically trained educator and based on his own fieldwork. The first four monographs in this new series, "Studies in Education and Culture," are described in this review.

The Relationship Between Anthropology and Education

No topic appropriate to the field seems to get more attention than the nature of the relationship itself between anthropology and education, or how to develop the anthropological perspective in education, or what such a perspective might accomplish. Montagu (1965), for example, declared himself in favor of having anthropology constitute the core of the curricu-

lum and argued that through knowing themselves and understanding themselves and their kind, children will be led through the concepts of anthropology to a knowledge that will further world peace and understanding. Recent contributions to this aspect of the literature have not been any more specific than were earlier ones as to precisely how this good will be achieved.

Brameld (1965), consistent with his reconstructionist viewpoint that cultures can be remade and that schools must take the lead in this remaking, presented a case for a new relationship between social scientists (particularly anthropologists) and educators. Value judgments, according to his proposal, would not only be characterized but would also be judged in the normative context of what he called "social-self-realization." This new anthropotherapy is the "theory and practice of descriptive and prescriptive human roles." In a comment on Brameld, Spindler (1965) held that the role of the anthropologist is to "provide empirical, descriptive investigations of the consequences of educational actions in terms relevant to educational settings," information that contributes to an understanding of the relation of the learner and the teacher to the sociocultural system in which they operate. Spindler pointed out that while such knowledge has implications for the kinds of normative judgments which Brameld seeks, the judgments are "consequential, not intrinsic to the information."

"Anthropology and Education" in Teacher Education

Anthropologists who write for the patron audience in education have discovered that their efforts are likely to be rewarded with repeated hearings. One might devise a thumbnail index of the influence of anthropologists in education by tabulating how frequently certain articles or authors reappear in the ubiquitous collections of "readings." Increasing attention to the cultural perspective is being given in such readings in the social foundations of education, as evidenced by a recent collection for an introduction to education through comparative analysis edited by Adams (1966), which contained some 56 readings, over half of which either were written by anthropologists or were cross-cultural in perspective.

Anthropologists play a more direct role in teacher-training programs either by participating in the programs or by preparing curriculum materials for use in teacher training. Landes (1965) described her participation in a teacher-training "experiment" that paired cultural anthropology and education in a project which sought more effective methods to help teachers work in multicultural classrooms. Although rich in insight and idea, particularly in the number of individual instructional projects suggested for use in training educators and social workers, Landes' account ignores design, omits details of procedures, and lacks convincing evidence that the participants achieved success in "applying culture concepts and knowledge to school and welfare needs."

Several studies from Project TRUE (Teachers and Resources for Urban Education) conducted at Hunter College have provided curriculum materials for the preparation of teachers who will serve in urban schools in slum areas. Moore (1961) presented a series of descriptions, questions, and discussions based on observations made in grades 1, 2, and 4 in three schools in lower income areas. His material was developed specifically for use in training teachers who expect to enter urban school systems and who "must, unhappily, expect one of the poorer classes to begin with." Observations made in different classrooms in the same grade and school illustrated dramatic differences among individual teachers in dealing with ethnically different pupils. Moore lauded teacher practices consonant with two behavior models which he identified to help a teacher in the search for appropriate style and methods. The models suggested were the revitalization prophets reported in anthropological literature and the model of the anthropologist himself as a fieldworker, a "student of the ways of others." Eddy (1967) drew upon the same observational data, plus comparable data from additional elementary and junior high schools, to analyze the social setting within which the formal education of the pupil in the slum occurs and to discuss some consequences for the relationship between the pupil and educator. She concluded that the relation between the urban educational system and the modern child of the slum is an unresolved problem in American education, and that forces external to the formal educational system are playing a more effective role in socializing the urban poor into becoming active participants in the community. Fuchs (1966) provided two case studies of one aspect of these external forces—the civil rights movement of community resistance to and action against procedures in public education which are perceived as discriminatory. In the first case study, a principal's letter to his faculty—intended to acquaint them with the nature of their pupils' backgrounds—resulted in an unanticipated reaction among members of the local community. The second study examined resistance on a larger scale, a massive school boycott in New York City in 1965 against *de facto* segregation. Case study material included attention to both the historical and social context of the Negro civil rights movement and the reasons for and effects of participation in this protest as illustrated by depth interviews with 11 teen-agers.

Curriculum Materials for Classroom Use

Anthropologists are by no means in agreement about whether the subject matter of their discipline should be included in the curriculum of the public schools. Nevertheless, several curriculum projects, directed and staffed by anthropologists as well as educators, have been developing anthropology material for classroom use at every grade level. Noteworthy among such projects is the Anthropology Curriculum Study Project (1966) sponsored by the American Anthropological Association and supported by

the National Science Foundation. Accomplishments of the Project to date include (a) the development of annotated bibliographies pertaining to the field of anthropology and education generally and to anthropological materials suitable for high school use; (b) articles and reprints discussing the role of anthropology in the high school curriculum, including a critique of world history texts from an anthropological point of view by Sady (1961); and (c) teaching units designed for use in high school social studies classes. Three units have been completed: an outline for teaching "The Idea of Liberty in American Culture"; "The Great Transformation," a unit of approximately seven weeks' duration dealing with the food-producing revolution; and "The Study of Early Man," an archeological unit. The comprehensiveness of the materials being developed is illustrated by the contents of the latter unit: for the teacher, a 115-page day-to-day guide for each of 27 days of the unit; and for each student, 2 site maps, 22 evidence cards, 3 charts, and a set of 20 specially prepared readings. The Project provides information on the current status of its activities and of available materials through publication of an annual "Fact Sheet" available on request, and it invites inquiries from teachers and administrators interested in curriculum development.

Curriculum materials for use in the elementary school are being developed by the Anthropology Curriculum Project at the University of Georgia under a grant from the U.S. Office of Education. Units for grades 1 and 1. "The Concept of Culture," and for grades 2 and 5, "The Development of Man and His Culture," have been completed. A unit on "Cultural Change" for grades 3 and 6 will be completed in the spring of 1967. This project also invites inquiries regarding its materials.

Education as a Cultural Process

Education viewed as a cultural process is the central concern of and link between anthropology and education. The studies dealing with education as a process are presented here under three categories: (a) those dealing with the school as an acculturative agent representing domination of one group by another, (b) those dealing with the school primarily in the role of enculturator, and (c) studies in which the formal educational institution itself is the object of inquiry.

Acculturation

As a result of their fieldwork among the Oglala Sioux, the Waxes and their colleagues have made several important contributions to the literature concerning the public school as an agent of acculturation. Wax (1963) suggested several causes for Indian educational problems: (a) cultural disharmony; (b) the extent to which Indians feel that schools are punitively directed against them rather than designed to help them; (c) low

participation among the Indian people in decision making on educational matters; and (d) the "career ignorance" of both the variety of occupations and of the necessary educational prerequisites which result from the provincial quality of their environment and of their isolation from the mainstream of the dominant society. The effects of isolation received more emphasis in a monograph by Wax, Wax, and Dumont (1961) which described formal education among the Sioux and which called attention to the conditions of isolation for the teachers (between themselves and other teachers at the school, within the classroom resulting from mutual rejection between teacher and pupils, isolation of teachers from parents in the Indian community, and isolation of teachers from their own metropolitan society) as well as the isolation of the members of the Indian community from the mainstream of modern life. The authors also introduced the concept of the "Vacuum Ideology," the tendency for administrators and school officials to make decisions based on the assumption that both the Indian home and the mind of the Indian child are meager, empty, and lacking in attention—that because the Indian child's home lacks books, magazines, radio, television, or newspapers, the child's life is therefore empty and the school must "teach him everything." In another study Wax and Wax (1965) focused their attention on high school dropouts among the Indian population. They concluded that the dropout from a conservative reservation family typically reflects a "head-on collision with the authorities" and rejection by a high school social system that favors the more advantaged or more cautious student. Supporting the observation by the Waxes that education does not look the same from the bottom as from the top, La Flesche's (1963) account of life in an Indian boarding school (originally published in 1900) presents a sensitive autobiographical reflection of one Indian boy's experience with institutional life.

From companion studies made in neighboring Kwakiutl villages on the coast of British Columbia, Rohner (1965) and Wolcott (1967) directed attention to cultural factors in modern village life which influence the academic performance of Indian children in Canada. Rohner described a cultural context for village life for which the assumptions of the formal educational system are inconsistent. The school represents a discontinuity in the lives of the children. Rohner also discussed how pupil performance is influenced by the teacher's attitudes toward, and relationships with, members of the community. Recognizing the importance of the community-teacher relationship to the effectiveness and morale of the teacher, Rohner offered an anxiety-fantasy hypothesis to account for the distortion of interpersonal relations and for the subsequently poor adjustment and lack of success of those teachers in circumstances of isolation who are unable to control the anxiety-fantasy reaction because they fail to maintain day-to-day contact with villagers.

Wolcott's monograph (1967), one of the "Studies in Education and Culture," provided a detailed study of a Kwakiutl village and school during

his year as a teacher-ethnographer. His account focused on five school-age children and their families. The families showed different degrees of acculturative status within the village, differences which affected the orientation and performance of the children in school. The description and implicit contrast between life in the village and life in the classroom draws frequently on accounts given by the Indian pupils and by former village teachers. In an epilogue Wolcott reported the progress of the same pupils for two years subsequent to the initial study, including the impact not only on the children but for the entire village when the decision was made to close the village school.

Hobart and Brant (1966) contrasted Eskimo education in Greenland, under Danish administration, with that in Western Arctic Canada, particularly in terms of sociopsychological impact. They characterized the Canadian system as an attempt at cultural replacement intended to replace traditional with modern culture in the course of a generation or two. Danish policy in pre-World War II Greenland attempted to maintain cultural continuity on the assumption that the conditions of life were changing slowly enough so that the old ways could adapt without explicit manipulation. More recent Eskimo education there has shifted in the direction of a cultural synthesis aimed at introducing change on a planned basis, although the recent increase in the number of Danish teachers has introduced new problems and sources of stress in the education of Greenlanders. Far less success was reported for Eskimo education in Canada. The authors elaborated on four aspects of the Canadian educational program which have contributed to its ineffectiveness and which contrast with procedures used in Greenland: (a) exclusive use of Southern Canadian teachers; (b) instruction limited to English; (c) almost exclusive use of curriculum materials developed by and for Southern Canadians; and (d) the use of very large boarding schools. They advocated an educational program patterned after that of Greenland to provide for the alternatives of returning to a more traditional way of life or acquiring the prerequisites for training for employment in the dominant economy.

A monograph by Gay and Cole (1967), one of the "Studies in Education and Culture," dealt with the Kpelle people of Liberia in another example where a Western-style school bears little resemblance to the culture of the home and community. The study began with an account of village life and the transmission of indigenous culture, including the time which children spend at the Bush school learning the traditions of the tribe, conformity to the tradition, and how to provide the necessities of life. A discussion of the curriculum in school, particularly in mathematics, supported the conclusion that school-learned mathematics skills, and almost the entire curriculum, have little relation to life outside the classroom or to the cognitive style of the Kpelle people. Mathematics as a subject was described as "isolated and irrelevant, a curious exercise in memory and sly guessing." The authors analyzed how villagers deal conceptually and

linguistically with arithmetic (organizing and classifying sets, counting, comparison, and operations), geometric shapes and constructions, measurement, and reasoning. The study illustrated the need for a better reconciliation between indigenous mathematical behavior and the formal curriculum.

Foster (1965) related major aspects of the development of formal education in the precolonial, colonial, and contemporary scene in Ghana, drawing on previous accounts to characterize the indigenous and traditional educational system and on his own sociological research among secondary school students to characterize the emergence of a formally educated minority which benefits socially by its association with schooling in spite of a curriculum which is essentially dysfunctional. Foster noted: "One of the most important things about formal education is not merely what one learns in school but that one has *been* when the bulk of the population has not" (p. 161). Yet even a restricted educational output in Ghana has produced an oversupply of educated school leavers, a consequence Foster attributed to the disparities between the rising output of the schools and the low rate of economic expansion.

Enculturation

Two of the books in the series on education and culture, edited by Spindler and Spindler, those by Singleton and by Warren, described schools in modern societies in which the school provides continuity and stability for the community, particularly in its more traditional aspects. Singleton (1967) studied the structure and process of education within a Japanese public "middle" school in a city near Tokyo. He analyzed the school first for its internal structure and culture, and then as a community interacting with three major external community forces: (a) the local community, in terms of both the shared perceptions and aspirations for education and the interaction between community and school; (b) the administrative hierarchy, ranging from the local and prefectural school boards to the Ministry of Education; and (c) the professional community of Japanese teachers as members of the Japan Teachers Union and as classroom teachers at the Nichū Middle School. The study provided not only a thorough case study of a school in a modern and complex culture but also an implicit study of the resistance of the Japanese educational system to the attempts made by the Americans during the Occupation to introduce directed educational change.

Warren (1967) described a rural German village undergoing rapid cultural change as a result of industrialization and of the role of the village elementary school in stabilizing the community and mediating between forces of persistence, reflected in the attitudes of long-time residents, and forces of change resulting from a group of village newcomers engaged as workers at a new factory. A richly detailed account of pupil and teacher

behavior from classroom to classroom throughout the school enabled Warren to illustrate how the school reflected the more traditional aspects of the culture of the community since the hesitancy of teachers to make any changes in the school program was constantly reinforced by a conservative local culture.

For her thesis, Lee (1965) drew support from accounts of adult males in two societies, the Jews of Eastern Europe and the Plains Indians, that when education is necessary to the deep and pervasive values of the community and the carrying out of the significant role of the individual, then it need not be motivated externally but is undertaken through an inner urge. The boy, seeking to become a man, "set his own pace [and] sought the difficult willingly and effortfully at his own initiative" (p. 98). Spindler (1964) contrasted adolescent education among the Tiwi and the Menomini with the education of the American teen-ager and described both the shortcomings of the formal high school program and some of the compensating elements indigenous to modern teen-age culture, including some observations on an important teen-age subculture in California, the "car cult."

Although anthropologists have typically drawn upon examples from primitive education in prefacing reflections on education, there is yet little evidence of applying the approach of the cross-cultural method *per se* to education in the same frenetic manner that some anthropologists have used in cross-cultural tabulation. One such exploration, reported by Epstein (1965), resulted from a search for a less encompassing term than *formal education* as a descriptive category for comparing the educational "setting" cross-culturally. The investigator set out to assess whether the concept of deliberate or "professional" instruction would better serve to differentiate the organization of instruction among different societies. In fact, however, he differentiated professional instruction on the criterion that to be professional the instructor had simply to be a non-kin. Failing to support by statistical treatment his statement that non-kin instructors provided a useful way to delimit the notion of formal education, he concluded with a discussion of the treatment of cross-cultural data through the use of "tertiary sampling," a technique as remote from primary data as its name suggests.

The Educational Institution as the Object of Study

Kimball (1965) has reminded educators that *all* the conditions and processes associated with the transmission of culture, not only the formally organized enterprise of teaching subject matter and skills, are within the major prerogative of professional education. Nonetheless, it is appropriate that some investigators apply an anthropological perspective to studies of the formal educational setting. Atwood (1964), organizing his case study around "anthropological interaction theory," described and analyzed how

an attempt to improve the guidance services for pupils in a large city high school met with unexpected resistance by members of the faculty. The extent of resistance was analyzed in terms of prior changes in the properties of interaction. While Atwood's article is the most overtly anthropological in perspective, the entire volume, edited by Miles (1961), in which it is reported is an excellent collection of case studies, research articles, and discussions dealing with deliberate, novel, and specific changes introduced throughout a range of settings in formal education from the individual classroom to nationwide curriculum projects. In a similar vein, Carlson (1965), in a study of the adoption of three educational innovations (modern mathematics, programed instruction, and team teaching), reported some unanticipated consequences in the adoption of one of them, programed instruction. He found that the use of programed instruction resulted in modifications of the programs by some teachers so that they could maintain their position as directors of learning. He also reported instances where teachers restricted the output of the faster students so that the range of student programs was minimized rather than maximized as in the original intent behind the innovation. This sensitivity to unanticipated consequences in educational research suggests an open approach to gathering and analyzing field data quite compatible with an anthropological perspective in studying the diffusion of an idea.

Williams (1966) described change and persistence as orderly reciprocals of the phenomenon of cultural dynamics. He argued that the study of change must look at *both* of these universal features of culture, as well as at two additional and uniquely human characteristics, the reflexive capacity which enables man to anticipate future consequences on the basis of past ones, and the mechanisms of ego defense. Williams cited the nature of change in education as a case of change/persistence occurring within a culture which simultaneously encourages change and innovation and yet finds discomfort and fear in departing from the familiar and tested. Because man can make rather precise short-range economic and technological predictions, Williams recommended that educators should refocus the educational process to the future so that children will be trained for the world in which they will live and work as adults. In a companion article Hobbs (1966) held that the principal forces for change in education are external to local educational systems, while the internal forces are oriented toward maintaining stability: thus educators are more inclined to resist or reject change-inducing forces than to depart from existing ways of doing things. Gallaher (1965) distinguished between two roles in directed change, the innovator who conceives of the change and the advocate who sponsors an innovation for the express purpose of gaining its acceptance by others; within the educational organization the impetus for change characteristically stems from an advocate. Gallaher's analysis of the formal organization of the school led him to conclude that the school administrator's role is not the one to which to assign the advocacy function.

Gussow (1961) discussed issues of observational methodology in the study of everyday classroom procedures resulting from his own observations of fourth-grade classrooms over a two-year period, including how the observer changes the structure of what he observes and how such change can be used as a way of learning about the structure itself. His discussion lent support to a point made in this review concerning the treatment of educator subjects. During the two-year period of the study Gussow reported that some of the initial enthusiasm among the staff of observers favoring the nontraditional modern private school and their initially negative attitudes toward the traditional public classrooms showed some shifts: "We began to find positive features in the traditional schools which we had not perceived earlier and the modern schools began to reveal features which made them less attractive to us than they had appeared initially" (p. 215). Perhaps if longer periods of fieldwork in the schools were a tradition in anthropology and education, administrators and teachers would not invariably appear so inadequate and insensitive as they are portrayed in almost every study reported in this review (with Singleton, 1967, and Warren, 1967, as notable exceptions).

Even a research center established to study educational problems has been scrutinized by an anthropologist. Smith (1966) described communication and status within an interdisciplinary research center staffed by educators and behavioral scientists and noted the paradox that while a basic purpose of such a center is to bring people from different disciplines and different ranks together, members of this staff communicated primarily within disciplines and within ranks. He also contrasted the perceptions of staff members toward the organization, the educator members tending to regard the center as a collective and team enterprise, the researchers from other disciplines tending to regard the center as a means for facilitating their own individual research.

Other Anthropological Studies Relevant to Education

Occasionally the topics to which anthropologists address themselves have some relevance to educators although the relevance is a by-product in terms of the original intent. Contemporary ethnographies, for example, frequently include at least brief attention to formal education where the context resides in the people being studied (rather than in the school system when the system itself is the object of study). Recent examples of such accounts include ethnographies by Madsen (1961) and by Rubel (1966) among the Mexican-Americans in Texas and an ethnography of modern Canadian Eskimo townsmen by Honigmann and Honigmann (1965). Two statements unacknowledged in previous reviews of this literature include the chapter "Schools and Education" in a study of the Indians of British Columbia by Hawthorn, Belshaw, and Jamieson (1960)

and the discussion of education among Italian-Americans in Boston by Gans (1962).

Anthropological accounts of child rearing, childhood, and adolescence offer a cross-cultural perspective on the socialization process. New contributions to this literature include a series of articles dealing with the cross-cultural study of the socialization process by Cohen (1964) and two volumes reporting aspects of the massive Cornell-Harvard-Yale study of comparative socialization in six cultures. The first of these volumes, edited by Whiting (1963), is a collection of six ethnographies, each made by a team of anthropologists, reported in broadly comparable accounts presenting an ethnographic background of the community and an account of child training practices therein. A second volume, edited by Minturn and Lambert (1964), further described child training practices and policies collected during the original fieldwork from mothers in the same six cultures by means of a standard interview schedule.

Another area of shared interests between anthropologists and educators is that of linguistics. Contributions to the field of language and learning come from scholars in several fields (see an entire issue of the *Harvard Educational Review* devoted to this topic, edited by Emig, Fleming, and Popp, 1961). How anthropological linguists approach the study of communication is illustrated in a special issue of the *American Anthropologist* edited by Gumperz and Hymes (1964). Particular attention should be drawn to the discussion in that volume by Bernstein (1964) in which he presented a theory of elaborated and restricted linguistic codes which relates social structure to forms of speech and suggests a way of accounting for the differential response to formal education made by children from different social classes.

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CHAPTER VIII

Economics and Education

CHARLES S. BENSON

The interests of economists in the field of education appear to have centered chiefly on four topics: (a) measurement of the economic benefits of education, (b) educational planning, (c) efficiency criteria, and (d) adequacy of revenue sources. Two bibliographic sources cover all four topics: Alexander-Frutschi (1963) and Blaug (1964).

Measurement of Economic Benefits

The basic techniques were well established in the early 1960's. It is possible to measure lifetime income differentials associated with various levels of education, compute the present value of such differentials, and compare these returns with the incremental costs of different stages of education. One then seeks to compare net returns from different types of education with each other; and one also seeks to compare net returns from education with yields of alternative uses of financial capital. This essentially is the method employed by the pioneer in economic benefit analysis, Theodore W. Schultz (1963). In general, returns to education, as seen from the societal point of view, appear to compare favorably—but not extraordinarily so—with the yield of investment in, say, physical capital.

Another important method is to assume that the marginal productivity hypothesis applies to total national income, as distinct from its application to single firms or industries, and then to convert rising levels of educational attainment in the work force into shares of the secular rise in net national product. This is the analytical scheme employed by Edward F. Denison of the Brookings Institution. In his famous earlier study, Denison (1962) reported that past expenditures on education had accounted for 23 percent of economic growth in the United States during the period 1929-57.

In the period of this review certain advances in analysis were reported. Denison (1966) indicated that he had applied his scheme of measurement in England and reached the conclusion that the productivity differentials between the United States and England could not be explained significantly by differences in investment in education. Weisbrod (1961) presented a comprehensive statement on the variety of economic benefits afforded by education, including the important "option" which individuals receive to pass from one stage of educational development to the next. H. P. Miller

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(1965), another pioneer in measurement, gave the results of his analysis of the effect of economic growth itself on education-related income differentials among individuals, and indicated that the cross-section estimates formerly used by economists had actually underestimated returns to education. But the most important presentation was that of Becker (1964). Becker's work represents the definitive statement on the economic returns of education at this time. On the troublesome matter of disentangling the shares of income differentials properly attributable to level of education as distinct from level of ability, Becker was able to show that the ability factor appears to account for only a small part of the differences in earnings, though ability is more significant in income differentials of college graduates than of high school graduates.

At the same time that new work in measurement was coming to light, the general processes of analysis came increasingly under attack. Blaug (1966) stressed the point that the available studies seldom deal simultaneously with both the demand and supply sides of the market for educated people. Bowman (1961) has raised serious questions about the use of "returns-to-education" studies in policy making, especially in underdeveloped countries. She is particularly critical of existing studies as being too highly aggregative in nature and as offering little guidance on the true value of the marginal, as distinct from the average, yield on educational investments. We might best agree with Bowen (1964) that although the evidence clearly indicates a positive relation between education and economic growth, the precise quantitative assessment of the relation still eludes our grasp.

Educational Planning

The earlier attempts by economists to engage themselves in educational planning placed heavy reliance on the manpower requirements approach. Estimates of the net increase in number of persons required in various occupations were established, these being based on an examination of the structure of a country's economy and of its rate of growth. Educational prerequisites, defined rather broadly, were then established for the different occupational categories. Finally, the size of the different levels of the educational system was established as planning goal, to provide a proper assortment of occupational skills at the target date. Moving ahead from these simple notions, we have seen in the last few years a considerable degree of refinement in educational planning techniques. Tinbergen and Bos (1965) have developed a model of difference equations, in which the import and export of educated persons can be taken explicitly into account, and in which the need of the educational system to employ its own product, i.e., as teachers, is recognized. Correa (1963) has presented a comprehensive model to allow for differences in student ability. Further, Correa's educational growth model is integrated with a general growth model for an economy; one can postulate, for example, the requirements placed on

the educational system to reduce unemployment to a stated level. The econometric types of educational planning models are sophisticated and imaginative, but unfortunately they cannot yet be made fully operational, the reason being that educational data are not yet sufficiently accurate and reliable.

Not all educational planning efforts are highly abstract, however. Anderson and Bowman (1965) and Harbison and Myers (1961) attempted to relate education structure to a generally described set of historical and institutional variables. Bombach (1961) has investigated the question of the appropriate degree of disaggregation of demand for educational outputs—e.g., manpower in private industry, manpower in the public sector, and private consumption demand. Porter (1965), using a relatively simple difference equation model, has shown that the market for college and university faculty is inherently unstable. Lastly, Lord Robbins (1963) has proposed that planning of higher education in Great Britain be regulated by the demand for places in the universities, without particular regard to estimated manpower requirements in the country, which is to say that he favored continued reliance on ordinary market forces to accomplish the matching of persons, skills, and job openings.

Efficiency Considerations

The economist has a long-standing concern with efficiency in the use of resources, and education has not wholly escaped his scrutiny. As W. L. Miller (1966) has shown, the English classical economists, particularly John Stuart Mill and Nassan Senior, were troubled that educational provision for the lower classes appeared to be so meager. Indeed, they felt that England would receive economic gains from investment in the education of the poor. The classical economists were also bothered by the fact that many schools appeared to be too small, i.e., the educational system was failing to reap economies of scale. These concerns are still shared by economists today.

Benson (1965) and Coleman and others (1966) have obtained similar results to show that educational attainment is most strongly related to the family background characteristics of pupils. Assuming that it is a proper social policy to raise minimum levels of achievement, it would appear that the making of greater educational provision for disadvantaged children is desirable. We know, further, that educational resources are quite unevenly distributed among classrooms in the United States (Harrison and McLoone, 1965). It is difficult to specify, however, just what combinations of educational inputs are effective in helping the disadvantaged to raise their level of school performance. This is where cost-benefit analysis may have a role to play.

In general terms, cost-benefit analysis involves the following steps. First, objectives are defined in operational terms. Second, alternative means to

accomplish the objectives are listed and priced (in money terms, commonly, but conceivably in time—pupil's or teacher's). Third, the preferred means is chosen. Ordinarily, the criterion of choice would be such that the preferred means (a) yielded the largest volume of educational outputs at a given expenditure or (b) accomplished the objective at lowest cost. Techniques of cost-benefit analysis in the public sector have been discussed by Chinitz and Tiebout (1965) and Wiseman (1965). Though cost-benefit studies have been commissioned by the U.S. Office of Education, in connection with the implementation of the Elementary and Secondary Education Act of 1965, there are as yet no actual studies available on the efficient allocation of resources within given school districts. A macro-economic application of cost-benefit analysis, however, is given in Hirsch and Marcus (1966). These authors concluded that on grounds of economic efficiency alone, year-round operation of secondary schools probably is preferable to the establishment of universal junior college education.

Cost-benefit analysis calls for the establishment of new budgetary classifications, classifications that relate closely to the actual programs or activities carried on in a school system. Program budgeting in education at the local level has been discussed by Burkhead (1965) and at the federal level by Novick (1965). A new theory of budget making has been developed by Davis, Dempster, and Wildavsky (1966).

Not all of the economist's concern with efficiency in education can be expressed in cost-benefit terms, however. It is important that we have reliable expenditure forecasts for the locally administered education services, and these have been provided by Mushkin and McLoone (1965). It is important to continue to assess quality of local educational services in terms of process variables. Two recent studies that emphasize this approach are those of Firman (1966) and Welch (1966).

Finally, on the matter of economies of scale, Riew (1966) has presented convincing evidence that such economies are of substantial magnitude at least up to a size of secondary schools of 900 students; he surmises that they may extend to considerably larger sizes of school operation.

Adequacy of Revenue Sources

Though the economist is desirous of seeing the educational system function at a high level of efficiency, he is not inclined to argue for budget cuts. On the contrary, he is prepared to recognize that expenditure requirements often outstrip the yields of existing revenue sources. The present state of finance is described in a report by the National Education Association (1966) which shows clearly that the property tax has continued to be the chief source of locally collected revenue. Netzer (1966) has provided an exhaustive treatment of the property tax, and it must be admitted that the levy comes out with low marks in terms of equity and economic neutrality.

State grants for schools represent the second most important source of school revenue. The contrast between the old and new forms of state grants is discussed in Benson (1961). Rowntree (1966) established a theoretical criterion for judging the efficiency of state grants and applied his criterion to the system of subventions used in California. In terms of his analysis, California education grants are unduly drained off into local tax relief and, in effect, into support of nonschool, local public services.

Given the existence of concern both about the property tax and about the efficacy of state grants, the number of proposals which have been made for the rationalization of our sprawling local government structure is not surprising (Benson and others, 1965; Committee for Economic Development, 1966). Fiscal problems of the schools are accentuated, moreover, by the "crisis in the cities." City tax bases are showing a relative decline as compared with the suburbs, and so are city school revenues. Yet, the volume of necessary school expenditure in central city areas appears to be high and rising. These matters have been dealt with by the U.S. Inter-governmental Relations Advisory Commission (1965); by James, Kelly, and Garms (1966); and by Thompson (1965).

New approaches to federal fiscal relations in education, possibly a solution to the urban problem, were discussed by Maxwell (1965) and by Mushkin and Adams (1966). The operation of the federal impacted area legislation has been subject to rigorous analysis by a Senate committee of the U.S. Congress (1965). Analysis of the effects and workings of the Elementary and Secondary Act of 1965 has yet to be provided.

With respect to the financing of higher education, Carovano (1966) has examined projected changes in enrollment by states relative to projected elasticities of state tax yields. The indications are clear that the new burdens to be placed, apparently, on the public economy will represent considerably higher efforts in some states than others. That the new burden on public revenues need not be excessive, however, is argued convincingly by Danière (1961), who would place a much larger share of the support of higher education on student fees. The proposal is developed through examination of conventional postulates about free choice in the market economy. On the other hand, Stubblebine (1965) suggests that the revenue potential of institutions of higher education is greater under a balanced income structure, a structure embodying fees, public grants, private gifts, and so on.

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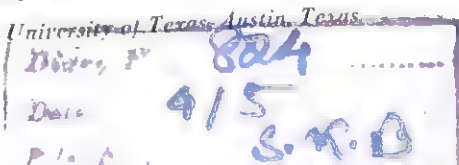
April 1967

Language Arts and Fine Arts

Reviews the literature for the three-year period
since the issuance of Vol. XXXIV, No. 2, April 1964.

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FOREWORD

This issue of the REVIEW follows the general pattern in the language arts and fine arts cycle by reviewing the research which has appeared since the material covered by the April 1964 issue. Several changes in organization are apparent from an examination of the Table of Contents: (a) Reading has been divided into two chapters; (b) Literature has been presented in one chapter; and (c) chapters on Speech and Mass Communications are not included. All of these changes were planned by the Committee—except the omission of the chapter on Speech, which could not be included because one contributor found it impossible to meet the deadline requirements. Some material on Speech will be found in the chapter on "Psychology of Language."

The amount of research published in language arts and fine arts during the last three years is great. The contributors have tried to be very selective in what they have included. Our goal was to prepare an issue which was "critical and interpretive rather than encyclopedic." A careful assessment by the reader will determine whether or not we have reached our goal.

The research in the language arts has moved ahead substantially in the last three years. Problems of design, proper analysis, and attention to significant issues remain areas in which further improvement is needed. Perhaps the 1970 issue on language arts will record greater progress in these areas.

Special acknowledgment must be made to the Editor, who with tact, persistence, and talent guided us in all phases of the issue, and to Margaret Early, whose suggestions for organization and contributors were especially helpful.

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CHAPTER I

The Psychology of Language

S. JAY SAMUELS*

In the three years since the previous REVIEW, we have witnessed continued efforts by linguists to describe the knowledge which a native speaker has about the structure of his language and by psychologists to describe how that knowledge described by linguists is acquired and utilized. This period has also been one of continued evaluation of theories of language acquisition, controversy regarding the relative contribution of heredity and learning to language acquisition, added understanding of developmental sequences in language learning, and application of findings from the psychology of language to problems of school learning. An old survey of theory and research literature has been reprinted (Osgood and Sebeock, 1965), two reviews of recent research literature have been prepared (Diebold, 1964; Ervin-Tripp and Slobin, 1966), and a characterization of the new field has been given in nontechnical language by one of its founders (Miller, 1964).

Learning and Nativistic Theories of Language Acquisition

New theories concerning the nature of language and the modes of their analysis (see especially Chomsky, 1965) have raised strong doubts whether traditional associationistic, learning theoretic accounts of language are tenable. Since these accounts are essentially all that psychologists have offered in the past, many theorists have been under attack. Mowrer (1960), for example, gave a typical analysis and suggested that the child receives secondary reinforcement upon hearing himself make sounds which are similar to the ones the rewarding parent makes. This accounts for the child's progress from babbling to adult forms of communication. Lenneberg (1964b), however, demonstrated that infant vocalizations through the first year of life are very different from adult speech sounds. Comparisons of sound spectographs of infants and mothers indicated that even with training mothers seem incapable of imitating the sounds their children make. From these observations, Lenneberg questioned the assumption that motivation for learning to speak originates through reinforcement provided by the similarity of infant and adult speech sounds.

* The author has profited greatly from the comments of John Flavell, Terry Halwes, James Jenkins, and Robert Shaw of the Center for Research in Human Learning at the University of Minnesota.

Another associationistic model was offered by Staats and Staats (1963). They used a Markovian word-to-word response probability model to explain the learning of syntax. Through operant conditioning the child learns associations between grammatical classes so that words in a particular class tend to elicit words in the next grammatical class. For example, words like *give*, *throw*, and *push* tend to elicit words like *him*, *her* and *it*.

Jenkins and Palermo (1964) attempted to explain syntax acquisition by means of phrase structure and mediational processes. However, a comparison of Jenkins' position in 1964 with his 1966 position (Jenkins, 1966) indicated a shift from a learning theory explanation to one in which recognition is given to innate as well as learned factors in language acquisition.

Braine (1963a,b) suggested that in learning English a child first learns the temporal location of words in a sentence and associations between pairs of morphemes. Bever, Fodor, and Weksel (1965) took issue with this and other theoretic explanations of syntax acquisition. They claimed that S-R learning theory cannot adequately explain how transformations are learned, nor can it explain how syntax is learned in languages such as Russian where word order has greater flexibility than in English. Miller and Chomsky (1963) criticized Markovian models as being too simple to explain complexities of adult speech and thus added a further difficulty for Markovian models of language acquisition.

Liberman and others (1964) proposed a theory of speech perception which states that neural surrogates of articulation mediate between the acoustic stimulus and speech perception. In support of this theory, Prins (1963) found that children who confused place of articulation during speech production also had difficulty hearing differences between pairs of words which differed in the place of articulation (e.g., *pan*, *tan*). The theory was criticized by Lane (1965) and Lenneberg (1964b). Lenneberg cited anecdotal evidence regarding a child who had never been able to speak but who was able to understand spoken language perfectly.

Jakobson and Halle's (1956) influential hypothesis on how linguistic sound systems develop in the child was modified by Miller and Ervin (1964) to explain how children might acquire certain aspects of English grammar. Jakobson postulated that the child acquires his sound system by noting contrasts between acoustical features that are maximally different. Therefore, the earliest distinction is between a vowel and consonant. The next contrast might be between a stop and nonstop (/p/ and /f/). Miller and Ervin said that at various points in the grammatical system a distinctive feature analysis might be used to mark contrasts between plural and singular nouns, possessive and nonpossessive nouns, proper, mass, count nouns and noun determiners, as well as other features of the system.

Chomsky (1965), Fodor (1966), Fodor and Katz (1964), Greenberg (1963), and McNeill (1965) rejected purely associationistic accounts of language acquisition. They advanced, instead, the argument that the child's

learning of language involves innate mechanisms operating on information about the structure of language which the child gets from listening to the speech of adults. Lenneberg (1964a, 1966) detailed the reasons for considering language development as an innately determined program of behavior. First, linguistic universals such as phonetic systems and syntax are common to all languages. Second, historical investigations of languages reveal that although spoken languages change, at no time does one find evidence of human speech which can be described as aphonemic or ungrammatical. Third, specific language disability—characterized by delayed speech onset, poor articulation, and marked reading and second language learning disability—in which general intelligence remains unaffected appears to be inherited. Fourth, the developmental schedule of language acquisition follows a fixed sequence so that even if the entire schedule is retarded, the order of attainment of linguistic skills remains fixed. Finally, comparisons of children learning non-Indo-European languages with children learning English indicate a high degree of concordance between milestones of speech and motor development.

Empirical Findings in Developmental Psycholinguistics

Brown (1966) and Brown and Bellugi (1964) described three processes in the acquisition of syntax. In imitation and reduction, the child imitates what the parent says but systematically reduces the length of the utterance. The constraint on length seems to be related to the child's limited memory span. Adults stress high-information-carrying words in speaking, such as nouns, verbs, and adjectives, and these are retained in imitation. Words which communicate little information, such as inflections, auxiliary verbs, articles, prepositions, and conjunctions, are not stressed and are not retained in imitation. Thus, the child is helped in focusing his efforts on learning the essential features of the utterance.

A second process is imitation and expansion. Here the mother imitates the child's utterance but expands and corrects it. For example, the child says, "There go one"; the mother says, "There goes one." The child may then imitate the mother's corrected version of his sentence. Although the adult often speaks ungrammatically, in expanding, the parent uses simple, short, grammatical sentences, the kind the child will use in a year.

Although McNeill (1966) suggested that the slower rate of linguistic development of lower class children may result from the fact that lower class parents expand their child's speech less often than do middle class parents, there is no evidence that expansions are necessary for learning grammar. Cazden (1965) did not find expansion training superior to other forms of verbal feedback in improving the language of culturally deprived children.

The third process involves the induction of the underlying structure of the language. Certain errors (foots, digged) reflect the child's attempt

to induce regularities from the speech of adults. Menyuk (1961) emphasized that novel sentences which children generate indicate their use of rules.

According to Bellugi (1965) the best (and classic) indicator of linguistic development is sentence length. Bellugi divided early language acquisition into three stages. In Stage One, sentences averaged two morphemes in length by approximately the second birthday. Braine (1963b) and Miller and Ervin (1964) described the child's first grammatical two-word sentences. The initial word is called a pivot and consists of a small class of frequently used words (e.g., see, that) whose position has been learned. The class of words immediately following (e.g., pretty, baby, arm) is called an open class and consists of the child's entire vocabulary minus some pivots. This same construction predominates in early speech of Russian, German, Japanese, and Polish children (Slobin, 1967). Weir (1962) and Slobin (1965) noted that English- and Russian-speaking children "practice" speaking by holding the pivot constant and substituting words from the open class. Development of syntax, in part, consists of setting up new classes of pivots using words which previously were in the open class. Bellugi (1965) found that during the first stage of linguistic development the child asks questions by means of rising intonation (see hole?) and the use of *wh*-words (who that? why? why not?). At this stage the child can neither produce nor respond appropriately to questions which refer to the object of the verb (e.g., what did you hit?).

Bellugi (1965) found that children at Stage Two had a mean age of 29 months and produced sentences of an average length of 2.6 morphemes. Pronouns, articles, modifiers, as well as some inflections were present. Questions were introduced by *wh*-words (why not? who is it? what me fold?) with pronouns present. With regard to comprehension, children answered appropriately to most questions, including *wh*-object questions (what do you hear? hear a duck.). Miller and Ervin (1964) noted that mistakes during this period could be attributed to omissions (I'll turn water off), overgeneralizations (foots, digged), and use of doubly marked forms (mine's).

At Stage Three, children had a mean age of 31 months and an average utterance length of 3.6 morphemes (Bellugi, 1965). They were using auxiliaries, noun and verb inflections, the regular past, and were not limited to simple sentences. In constructing yes/no interrogatives, question intonations with inverted auxiliaries operate (I am silly. Am I silly?). In asking *wh*-questions, the inverted auxiliary was not used (what the words are doing?). The child was able to comprehend more complex questions than in Stage Two. By age three, Russian- (Slobin, 1965) and English-speaking children (Menyuk, 1963, 1964; McNeill, 1965) were using all of the basic syntactic structures used by adults.

Conflicting reports of children's ability to comprehend, spontaneously produce, and imitate sentences stem from differences in age of subjects and length of sentences used. Fraser, Bellugi, and Brown (1963) used

three-year-old children and sentences which had an average length of 4.0 morphemes. They found that the ability of the children to imitate was superior to their ability to comprehend, and their ability to comprehend was superior to their ability to spontaneously produce sentences. Ervin (1964) used two-year-old children and sentences which were, on the average, longer than those used by Fraser, Bellugi, and Brown. Ervin found that imitation, production, and comprehension were equivalent. Menyuk (1963) found that sentence length was not a potent variable when meaningful sentences were used, i.e., when the material to be remembered engaged the child's language processing apparatus. But there was a significant correlation between the length of a string of nonsense words and the ability to imitate it.

Language Theory and Language Behavior

To determine whether learning a miniature language might be described by a finite state Markov process, Braine (1965) presented a set of structured pseudo-sentences to subjects and measured retention of these sentences. In support of his explanation of how languages are initially acquired, Braine (1963a,b) found that positions of items within the sentences were learned. He concluded, however, that what is learned cannot be represented by a finite state grammar because it requires the assumption that the subject invents some of its rules. Gough and Segal (1965) agreed that a finite state grammar cannot describe what is learned. They claimed it is inadequate, not because it requires the assumption of rule invention (since any grammatical description of what is learned must make this assumption), but because the finite state model poorly represents what the subject does, in fact, invent.

Interest in Markov models of language has led to work on orders of approximation to English. Coleman (1965) had subjects rank sentences as to degree of grammaticalness and then memorize the sentences. Level one sentences were generated by randomly selecting words. Each succeeding level had words with increasing degrees of grammatical constraints. He found that not only sentences could be appropriately ranked, but there was a significant correlation between degree of grammaticalness and ease of serial learning.

Testing the psychological reality of linguistic formulations of language structure has constituted one important aspect of psychological research. Several investigators tested the reality of phrase structure either by requiring subjects to locate the position where clicks are heard in a sentence or by noting where errors occur in sentence recall. Fodor and Bever (1965) found that although a click was located within a phrase, subjects reported hearing it at the nearest phrase boundary. Johnson (1965a,b; 1966) observed that the probability of an error in sentence recall was higher between phrases than within a phrase.

Clifton, Kurcz, and Jenkins (1965) used generalization of a motor response as an indicator of sentence similarity. They found that response generalization occurred more frequently for sentences analyzed as being closely related grammatically than for sentences not so closely related. This work was elaborated for eight sentence types by Clifton and Odom (1966), who showed that syntactic variables had similar systematic effects in generalization, recall, and judged similarity.

The relationship between the syntactical form of a sentence and speed of comprehension was investigated by Gough (1965) and Slobin (1966). Both found that comprehension latency ran from shorter to greater in the order: simple declarative, passive, negative, negative-passive. However, by making sentences nonreversible (i.e., "Bill hit the door," as opposed to "Bill hit Mary") so that it was clear which noun was subject and which was object, Slobin found that reaction time was about as fast for passive as for simple declarative and for negative-passive as for negative. The interaction, in the Gough and Slobin studies, between a semantic component (true-false) and a syntactic component (affirmative-negative) emphasized the importance of both factors in comprehension.

Other investigations focused on the role of syntactic variables on sentence recall. Mehler (1963) demonstrated that when subjects were asked to recall sentences upon which grammatical transformations had been performed, they recalled simple declarative sentences best. Savin and Perchonock (1965) investigated the amount of memory storage capacity used in memorizing sentences of different syntactical form and found that the least amount was used by simple declarative sentences while negatives and passives required larger amounts. In both papers the authors suggested that in learning a sentence for recall, the semantic content of the sentence is encoded in the simple declarative form plus a tag, the tag indicating the original syntactical structure of the sentence.

Marks and Miller (1964) and Miller (1964) found that subjects could recall meaningful sentences better than anomalous but syntactically correct sentences, and syntactically correct sentences better than scrambled forms of these sentences. They concluded that semantic and syntactic factors are separate variables in verbal recall. Mehler and Miller (1964) studied transfer effects in the learning of lists of sentences. They used a design in which the subject learned list A, then list B, and was tested on list A. If the interpolated list (B) was semantically similar to list A, the recall of the semantic content of list A was facilitated. If list B was syntactically dissimilar, it interfered with the recall of the syntactic structure of A. They proposed a two-stage hypothesis for sentence learning. In Stage One the semantic component is learned and in Stage Two the syntactical form is acquired.

A series of studies by Rosenberg (1965) focused on the effect of grammatical and associative habits on incidental recall. When subjects were required to recall adjective-noun, noun-adjective, adjective-adjective, and

noun-noun word pairs, recall was superior for adjective-noun and noun-adjective pairs. In a second study where adjective-noun pairs which varied in word-association strength had to be recalled, he found that word pairs which had stronger associations were recalled better. Rosenberg concluded that associative habits contributed to the greater ease of recall of meaningful adjective-noun pairs.

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Coleman (1964) demonstrated that comprehension of prose is improved when nominalizations, passives, and adjectivalizations are changed to their active-verb counterparts. Ruddell (1963) found that comprehension was significantly greater for passages utilizing high-frequency patterns of oral language structure than for passages utilizing low-frequency patterns. Variables such as sentence length, sentence complexity, and the ratio between number of pronouns and conjunctions in a passage were found by Bormuth (1966) to have a high correlation with difficulty of comprehension. Samuels (1966) had elementary school children and college students read paragraphs equated for semantic content, word length, word frequency and syntax, but differing in that words in one paragraph had high associative relationships (green-grass) while words in the other paragraph had low associative relationship (green-house). He found that reading speed and recall were significantly better for the high associative paragraphs.

Gibson, Osser, and Pick (1963) found that as children gained in reading skill, they perceived letter-sound correspondences in units larger than the individual letter. Gibson (1965) modified Jakobson and Halle's (1956) method for determining phonemic contrasts and did a distinctive feature analysis of English upper-case letters. She found that children tended to confuse letters having similar distinctive features. Pick (1965) found the most relevant discrimination training to be practice which provided experience with the distinctive differences which distinguished letter-like forms.

Scherer and Wertheimer (1964) compared college students who were taught German by a method which early emphasized listening comprehension and speaking with students who were taught by a method which early emphasized writing and translating. They found that students who had been taught by the method which emphasized listening and speaking excelled in speaking but did not do as well in writing or translating from German to English. Mace (1966) found that speaking training should precede listening training for the most effective acquisition by elementary school children of listening comprehension in French.

Gaarder's (1965) recent review of bilingualism questioned the commonly held belief that bilingualism *per se* has a harmful effect on verbal

intelligence. Carroll (1965) claimed that when an individual has approximately equal proficiency in two languages, there is no good evidence that such bilingualism retards intellectual development. Furthermore, according to Carroll, reports of scholastic retardation associated with bilingualism may usually be explained by the fact that the bilingual had been instructed in a language he had not adequately mastered.

A Few Concluding Comments

Although findings from psycholinguistic investigations, in general, lend support to theoretical formulations of linguistic structure, the controversy continues over the specific contributions of innate factors to the acquisition of language. Finally, although studies in psycholinguistics have potentially important implications for education, they have had little impact so far.

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CHAPTER II

Reading in the Elementary School*

JAMES F. KERFOOT

This chapter reviews significant research on reading in the elementary school from July 1963 to June 1966. Approximately 900 research articles on elementary, secondary, and college reading appeared in the literature during this period. Because of an increase in the number of important contributions at each level, separate chapters on elementary and secondary reading have been prepared. Representative studies in elementary school reading are discussed here under the following headings: bibliographies and reviews, methods, U.S. Office of Education First Grade Studies, early reading and readiness, factors in success and failure, in-service programs and evaluation, and interests and tastes.

Bibliographies and Reviews

Each year important summaries of investigations related to reading instruction are prepared. General reviews covering elementary school reading include those by Harris (1964); Harris, Nudelman, and Carlson (1965); Harris, Otto, and Barrett (1966); Robinson (1964); Robinson, Weintraub, and Hostetter (1965); and Robinson, Weintraub, and Smith (1965). Doctoral dissertations on reading have been predominantly concerned with the elementary school level. Dissertations from 1919 through 1960 were reported by Fay, Bradtmueller, and Summers (1964); those completed since 1960 were annotated by Summers (1964) and Summers and Hubrig (1966a,b).

A number of research reviews were concerned with special topics. Many of these, though not encyclopedic, were comprised of carefully selected, important contributions on specific topics and were in some instances critical of design and appropriateness of conclusions drawn. Several useful integrative research reviews were developed during the period of this review by Townsend (1963; 1964a,b,c,d,e; 1965a,b,c; 1966a,b). Her succinct reviews covered a wide range of elementary school reading topics from auditing to the use of workbooks. Intensive reviews of specific topics are of great importance to teachers during this period of reading instruction characterized by proliferation of individual research studies. Teachers cannot be expected to contact the mass of annual research contributions

* The resources of the ERIC Clearinghouse on Retrieval of Information and Evaluation on Reading at Indiana University were used in compiling this review.

at first hand and must rely on the keen judgment of research synthesizers like Townsend.

Major reviews of research by grade level were developed by the U.S. Office of Education (Cutts, 1963; Gunderson, 1963, 1964) covering reading readiness, primary, and middle grade levels. An authoritative review of the research on the legibility of print was prepared by Tinker (1963). Ketchum (1964) reviewed some important studies on neurological factors in reading instruction, and Deal (1965) synthesized several studies concerned with the relationship of various *Wechsler Intelligence Scale for Children (WISC)* subtests to reading success or failure. A number of important research investigations of reading were included in the annual summaries of English language arts in elementary education by Petty and Burns (1965, 1966). Ashcroft and Harley (1966) reviewed studies which were concerned with reading and the visually handicapped. Sampson (1966) reviewed the studies on reading and adjustment, and the important area of reading and the disadvantaged was reviewed by Grotberg (1965).

Methods

Bloomer (1964) compared a structured method of teaching remedial reading with more eclectic approaches. Children who used progressive choice materials achieved significantly more than those using eclectic methods. Bloomer trained student clinicians in the use of the structured technique and believed it to be more readily learned than alternative methods. A number of studies attempted to assess the effectiveness of structured or automated techniques in teaching selected aspects of reading. Malpass and others (1964) contrasted two automated procedures for teaching word recognition and spelling skills to educable mentally retarded children with an individual tutoring method and conventional classroom instruction. Institutional and public school children were matched and randomly assigned to the instructional groups. Seventy-two words were selected from 100 in the Dolch-Buckingham Word List. The two automated groups made the greatest gains on the 28 nonprogramed words from the list of 100 words. Gains for the tutorial group were equal to those obtained using automated procedures, but retention was not as great.

McNeil (1964) tested the hypothesis that teachers behave differently toward boys and girls and that such teacher behavior is related to performance in beginning reading. Kindergarten pupils were taught 40 words by an auto-instructional approach, and word recognition measures were used to determine sex differences. Children were then tested on word recognition skills after four months of instruction with female teachers in first grade. When reading was taught by female teachers, girls were superior on the word recognition measures. However, contrary to the usual expectation of female superiority, the boys outperformed the girls when auto-instruc-

tional techniques were employed, which suggests that consideration should be given to the appropriateness of traditional first-grade procedures in teaching reading to boys.

Ten investigations of programed teaching for beginning reading instruction were reviewed by Ellson and others (1965). They compared the effectiveness of classroom teaching to programed teaching and concluded that a combination of the two was more effective than either approach alone. They further concluded that the effectiveness of programed teaching was related to the chronological age of the learner, his educational background, and several other factors. The appropriateness of programed tutoring should therefore be evaluated in relation to the characteristics of the specific child for whom such instruction may be intended.

In a longitudinal study by Bear (1964), matched groups of first-grade children were taught by analytic and synthetic phonic approaches. Seven classes of children were introduced to reading with a synthetic approach and then compared to seven classes of children taught by an analytic approach. Both groups used the same basal reader series. The phonic approach used was the only difference reported between the two methods. No significant differences were found between scores on the *Gates Primary Reading Test* and *Metropolitan Achievement Test* at the end of one year of instruction. At the end of the sixth grade, the synthetic phonic group was found to be superior on the vocabulary section of the *Gates Reading Survey*. No other significant differences were observed.

There is considerable current interest in the effect of teaching letter names and sounds in the initial stages of reading instruction. Olsen (1963) found that knowledge of letter names and sounds was essential in the first grade for developing a basic sight vocabulary. He found, in addition, that phonic applications to new words correlated 0.70 with a first-grade oral reading test. In addition, he observed that it was not necessary to develop a 75-word sight vocabulary before teaching word analysis skills.

The Initial Teaching Alphabet (ITA) approach to reading continued to attract strong interest. In a series of follow-up studies comparing ITA with Traditional Orthography (TO) approaches, Downing (1964) found that ITA pupils were significantly superior to TO pupils in the book level attained at the end of a two-year period. ITA pupils were also found to be superior on measures of word recognition and oral reading. No difficulty in transition from ITA to TO was reported. Bliesmer and Yarborough (1965) compared five analytic and five synthetic approaches to beginning reading instruction. Average or better teachers were randomly assigned for each approach, and instructional time was controlled. Analysis of covariance was used to control chronological age, IQ, and readiness scores. Scores on word reading, paragraph meaning, vocabulary, spelling, and word study skills from the *Stanford Achievement Test* were obtained for each group. The synthetic groups were superior in the majority of instances where statistically significant differences were found.

In an analysis of the popular two-vowel rule, Burrows and Lourie (1963) analyzed 1,728 two-vowel words on the Rinsland List and found that only 668 agreed with the two-vowel rule. They again found little agreement with the two-vowel rule while studying subgroups of words from the Rinsland List and the vocabulary of beginning readers from five different publishers. Fry (1964) attempted to generate a useful order for the teaching of phonics by ranking generalizations on the basis of the frequency of occurrence of sounds among common English words. The common or high frequency words in English were studied by Howards (1964) to determine the extent to which monosyllabic, multiple-meaning words create difficulties for children. The number of meanings known increased by grade level in grades 4, 5, and 6. The longer, single-meaning words were therefore thought to be easier than short, multiple-meaning words for primary grade materials. The cues by which beginning readers identify words were investigated by Marchbanks and Levin (1965). Three- and five-letter words were used to determine the cues to which beginning readers respond. Letters and word shape were manipulated, and the first letter of both long and short words was found to be the most often employed cue at kindergarten and first-grade levels. Last letters were the next most utilized cue by all except first-grade girls. The least used cue was word shape.

Additional References: Budoff and Quinlan (1964); Fox and Fox (1964); Groff (1964); Gurren and Hughes (1965); Mazurkiewicz (1965); Spache and Baggett (1965); Stone (1966).

U.S. Office of Education First Grade Studies

Research on beginning reading instruction has been the focus of intense interest in recent years. Unfortunately, independent investigations in beginning reading instruction tend to lack a comparability of such factors as design, materials used, and other specific ingredients in the reading programs investigated. To implement a cooperative effort and to ensure that reasonable control of design and procedure would be observed, the Cooperative Research Branch of the U.S. Office of Education supported 27 such separate coordinated research projects on beginning reading instruction. First-grade reading methods investigated included (a) basic reading, (b) language experience, (c) linguistic emphasis, (d) phonetic emphasis, (e) individualized reading, (f) initial teaching alphabet, (g) audiovisual, (h) reading readiness, (i) approaches for the culturally different, and (j) in-service programs and other approaches.

Space cannot be given in this review to a careful analysis of each of these 27 important studies; however, certain highlights should receive attention. One of the more important general observations to be drawn from the First Grade Studies is that teacher effect appeared to be greater than method effect. It is likely that the greatest improvements in reading

instruction may not result from a change of methodology, but from the improvement of teacher effectiveness.

Mazurkiewicz (1966) found significant differences in favor of ITA populations on tests of word reading, but no significant differences were found between ITA and TO groups on paragraph meaning and word study subtests. Tanyzer and Alpert (1966) found some advantage for analytic and ITA approaches. Hayes (1966) found ITA, analytic, and an eclectic basal program with phonics supplements to be superior to an eclectic basal program without phonics. Fry (1966) found no statistically significant differences between ITA, diacritical marking systems (DMS), and an eclectic basal reading approach. Hahn (1966) found an ITA and two modified language experience approaches to be superior to a basal reading approach on a word reading subtest.

Ruddell (1966) found that a programed basal reader which emphasized control of grapheme-phoneme regularities and an approach which supplemented the programed reader with materials stressing language structure as related to meaning were superior to a basal reading program and to a basal program supplemented by a program stressing language structure as related to meanings. Superiority was indicated on measures of word reading, word study skills, and regular word identification. Schneyer (1966) compared a linguistic approach with a basal reading approach at three different ability levels. The linguistic group was superior on a linguistic reading test while the basal reader groups were superior on four of five *Stanford Achievement Test* subtests. Eclectic, modified linguistic, and linguistic approaches were compared by Sheldon and Lashinger (1966). No significant differences were obtained in achievement or attitude.

Macdonald, Harris, and Mann (1966) compared individualized reading and ability grouping procedures and found no significant differences between groups on the four subtests of the *Stanford Achievement Test*. Having compared individualized and basal reading approaches, Spencer (1966) found that, except for rate, all differences favored the individualized approach. A basal reader approach was compared by McCanne (1966) with a modified language approach and a language experience approach for teaching children from Spanish-speaking homes. Superior reading achievement was reported for the basal reader approach. Harris and Serwer (1966) compared a basal reader approach with a Phonovisual supplemented basal approach, a language experience method, and an audiovisual supplemented language experience method. The basal reader approach was significantly superior on measures of comprehension and pupil attitudes. Reid and Beltramo (1966) found no advantage to any of the following methods: language method, letter sounds method, literature method, skills development method, or each of the last three combined with the language method.

An early intensive letter readiness approach and that approach supplemented with a writing program were found by Manning (1966) to be superior to a basal reading method. Murphy (1966) found that a letter name and sound approach followed by systematic phonics and visual word study and an approach which added writing responses to the preceding one were superior to an eclectic basal program. In spite of the commendable efforts to control the many variables found in first-grade reading instruction, a great many differences existed among programs called by the same name, and caution must be exercised in generalizing the findings presented in this brief account.

Early Reading and Readiness

A study by Durkin (1963) of the achievement of preschool readers reported on 157 children beginning first grade who were able to identify 18 of 37 common words on entrance into first grade. She found that they enjoyed quiet activities and solitary play more than did nonreaders. At the end of first grade, the early readers' test scores averaged one year higher than non-early readers. In another study, Durkin (1964) described the achievement of 49 children who read prior to entrance into first grade. Five years after entering first grade, these children ranged in achievement from 5.0 to 11.7 years on the *Gates Reading Survey*. She found that, among early readers who had been accelerated and were now in the sixth grade, median achievement was significantly higher than that of normal sixth-grade readers.

Hillerich (1965) reported the preliminary findings of a five-year study of a formal program of prereading skills in kindergarten. He evaluated 363 kindergarten children to determine the effectiveness of readiness programs with and without workbooks. By the end of first grade, the workbook group scored significantly higher on prereading and reading achievement measures. Brzeinski (1964) reported on the results of a kindergarten reading program for 61 experimental classes which received instruction in beginning reading for 20 minutes each day. At the end of grade 1, the kindergarten readers scored significantly higher in reading achievement than did the controls. Parents were trained to render assistance to their preschool children in reading and were thought to be successful in helping children to read if the children possessed mental ages of at least four and a half years.

Leton and Dayton (1964) investigated the relationship of critical flicker-fusion thresholds to reading readiness, various ability measures, and reading achievement. No differences in high and low readiness groups were observed on the basis of critical flicker-fusion scores, and correlations with ability and reading achievement scores were consistently low. Critical flicker-fusion thresholds appeared to be unrelated to reading achievement

as evaluated in this study. Katz and Deutsch (1963) presented the children in grades 1, 3, and 5 with a reaction time device on which appeared a red light, a green light, a high tone, and a low tone. When a stimulus was presented, the child was asked to lift his finger from a button as rapidly as he could. General reaction time decreased with increasing grade level. Good readers were able to react to a change in modality more quickly than poor readers. Flexibility of set may therefore be an important factor underlying reading success.

To determine the relative difficulty in visual discrimination of letters, Popp (1964) presented 65 kindergarten children with a task in which they were to match two alternative letter choices with a criterion letter. The letters most confusing to children were the pairs *b-d* and *p-q*. Most errors were rotations and reversals, and not of the close and break transformation types. A paired associate task was presented by Hendrickson and Muehl (1962) to kindergarten children to determine the factors operating in correct and incorrect orientation with the letters *b* and *d*. A group which received pretraining in noting directional difference between the letters and in making consistent left or right arm responses was significantly superior to a group which received pretraining with inconsistent arm responses and to a group given irrelevant cues. Implicit verbal responses appeared to play a role in correctly identifying the directional components.

Additional References: Birch and Belmont (1965); King (1964); Schoephoerster, Barnhart, and Loomer (1966).

Factors in Success and Failure

In an extensive study of the oral language of elementary school children, Loban (1963) used a taped interview technique for accumulating language samples. His language samples were carefully classified and related to selected aspects of language achievement, including reading. Two of the more significant conclusions were that competence in spoken language appeared to be an essential basis for competence in reading and that inductive reasoning was the most appropriate approach for developing generalizations. Auditory and visual memory span tests from the *Detroit Tests of Learning Aptitude* were thought by Sandstedt (1964) to measure some of the same abilities as the *WISC*. Retarded readers were more successful with visual tests of unrelated objects than with auditory tests of unrelated words. Visual and auditory memory span tests appeared to better discriminate retarded readers than did the *WISC* scales. She determined that retarded readers made higher scores on total visual memory span than on total auditory memory span.

Lateral dominance as a factor in reading achievement was investigated by Balow and Balow (1964), who used the *Harris Tests of Lateral Dom-*

inance with 302 children in first-grade classrooms. The tests were repeated in grade 2, and no significant relationships were found with word meaning and paragraph meaning average grade equivalents among children with normal, crossed, or mixed dominance. Neither strength nor direction of eye nor hand dominance was related to reading achievement. Age of establishing hand dominance was also found to be unrelated to reading achievement. Otto (1965) investigated the sibling patterns of good and poor readers and found a significant advantage in reading among only and elder children. Physiological correlates of reading behavior were reported by McGuigan, Keller, and Stanton (1964), who studied covert language accompanying silent reading. Chin and lip movements and breathing rate were found to be significantly higher during reading periods than rest periods, and audible subvocalizations decreased with increasing age. Subvocalizers were found to have a higher average lip movement and a slower average breathing rate than nonsubvocalizers. The *Illinois Test of Psycholinguistic Abilities* was used to determine whether reading disability was related to psycholinguistic factors. Kass (1966) found psycholinguistic disabilities among 21 retarded readers. Particular difficulty was observed with tasks at the integrational level.

Three studies reported on the effectiveness of summer reading programs for retarded readers. Aaron (1965) described a program which involved more than 400 teachers using basal readers, programed materials, packaged kits, and experience stories separately and in various combinations. Younger children who took the *Gates Primary Reading Achievement Test* at the end of the summer program averaged approximately two months' gain. Those who took the *Gates Advanced Primary Reading Achievement Test* averaged three months' gain, and scores on informal reading inventories indicated that children made an average gain of one and a half grades on instructional levels during the summer reading period. In a follow-up study of severely retarded readers, Balow (1965) found that, during the period of 9 to 36 months following intensive summer remediation, retarded readers without additional remediation stopped making gains, and those with supportive remediation continued to grow at approximately 75 percent of the normal reading growth rate. Although they did not lose the reading gains that took place over the summer, retarded readers appeared to require additional attention to ensure continued progress.

Balow and Blomquist (1965) studied young adult males who were two to five years below their expectancies during elementary school. The *Gates Reading Survey* and *Minnesota Multiphasic Personality Inventory* were administered to 9 of the 23 subjects. Average achievement scores for the nine students tested as follows: rate, 9.6; vocabulary, 10.9; comprehension, 10.2. Data on nine additional subjects were provided by telephone interview, making a total of 32 previously retarded readers. Of the 32 elemen-

tary school retarded readers, 27 had graduated from high school, 19 had studied beyond high school, and six were presently in college. It should be clear from this study that retarded readers may overcome their deficiencies and become successful adults.

Additional References: Bateman (1966); Harootunian (1966); Ruddell (1966).

In-Service Programs and Evaluation

A survey of teacher needs for in-service programs was conducted by Adams (1964). Twenty-eight separate aspects of the teaching of reading were indicated by teachers to be useful topics for in-service meetings. The most frequently mentioned topic was "corrective and remedial reading"; the second most frequently requested topic was "meeting individual differences." Morrill (1966) investigated the role of the consultant in promoting first-grade reading achievement. In five control schools, reading consultants met individually with teachers at their request. In five experimental schools, released time was given for half-day, semimonthly in-service meetings. Pupils in the control schools achieved significantly higher on paragraph meaning, vocabulary, and reading scores. Teacher attitudes, however, favored the experimental method of in-service meetings. An intensive in-service program was conducted by Heilman (1966) for first-grade teachers. A two-week preschool seminar preceded 25 two-hour seminars conducted during the academic year. Pupil achievement measures did not favor either experimental or control groups, but experimental teachers reported 86 changes in teaching procedures and 97 modifications of concepts related to reading instruction.

Sipay (1964) reported comparisons of informal reading inventories and various reading achievement tests. He observed that the three standardized tests employed overestimated instructional level by at least one grade level when the word pronunciation criterion was 96 to 99 percent accuracy. The frustration level was underestimated by all three tests, two of which underestimated by one grade level. Cloze procedures received additional attention during the three years of this review. Bormuth (1963) validated the cloze procedure on 50 children in grades 4, 5, and 6 as a measure of comprehension and found it to be a reliable approach across a wide range of comprehension ability.

Interests and Tastes

A number of comparisons between current and nineteenth-century children's readers were made by Mandel (1964). In the earlier books, identity

and motivation derived from the father, while in current readers peer groups served an important identifying role. The nineteenth-century readers portrayed a world of dangers, temptations, and evil impulses. In the current series, good impulses and rich possibilities prevailed. Wargny (1963) compared seven modern reading series with the McGuffey Readers. He found that religion and moral values were given special attention in the McGuffey series and that animal characters were present in only 19 percent of the McGuffey stories but appeared in 57 percent of the modern stories. The McGuffey Readers included stories of misbehavior, punishment, death, and social problems and offered children a much less insulated view of their environments than that depicted in modern readers.

Tape recordings of sharing periods were made by Byers (1964) to determine the topics which children find of major interest. Implications for the content of beginning readers, based on expressed interests, included emphasis on immediate environment and additional emphases on sciences, real life drama portrayals, and the necessity of reflecting boys' interests. A questionnaire study by Curry (1963) compared grade 5 pupil interests in reading with interests in other subjects. Reading was ranked fifth of the nine subjects by boys and also by girls. When preferences of the sexes were combined, reading ranked fourth. Boys chose the following in preference to reading: art, arithmetic, spelling, health, and physical education. Girls preferred spelling, art, music, and arithmetic. Inskip and Rowland (1965) recorded preferences of pupils and teachers for nine subjects. Preference ranks were significantly related to most and least successful subjects.

Additional References: Powell (1966); Weintraub and Denny (1965).

Summary

Research in reading during the past three years has been impressive in its volume and increasing sophistication. New statistical tools and better awareness of appropriate design now make possible the solution of questions which have remained unanswered through many years of investigation, and many new problem types have been generated by computer tools designed to solve existing ones. In such a milieu, it is difficult to select the most significant research contributions. Many studies of seemingly little general importance may serve as vital links in problem sets deriving from new theoretical models. The studies reviewed here are representative only of the general trend of reading research interest, although many studies not included are clearly important to the solution of specific problems. It seems likely that some of our most troublesome reading enigmas may soon be resolved in the accelerating trend of vigorous and scholarly research.

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CHAPTER III

Reading in the Secondary School*

EDWARD G. SUMMERS

This chapter summarizes and reviews significant research studies of secondary reading (grades 7 through 12) which appeared in the literature from July 1963 to June 1966. Preceding issues of the REVIEW devoted to language arts have reviewed secondary reading within the general topic of reading. Because of the increased volume of professional literature, including research conducted with secondary populations, it was considered appropriate to undertake a separate chapter for this level. The following categories were used to organize this report: (a) bibliographies and reviews, (b) program description and evaluation, (c) reading in content areas, (d) factors related to reading achievement, (e) reading skills and achievement, (f) development of interests, tastes, and attitudes, and (g) reading problems.

Bibliographies and Reviews

Annual reviews of research in reading which include research on secondary reading were compiled by Harris (1963); Harris, Nudelman, and Carlson (1965); Harris, Otto, and Barrett (1966); Robinson (1964); Robinson, Weintraub, and Hostetter (1965); and Robinson, Weintraub, and Smith (1965). Recent analyses of these well-known comprehensive summaries revealed that approximately one-fourth to one-fifth of the total research reported for all levels of reading was related to grades 7 through 12. Research on secondary reading appeared in the fifth, sixth, and seventh issues of a series of annual summaries of professional literature compiled by Robinson and Muskopf (1963, 1964, 1965). Summaries of investigations relating to secondary language arts reported by Blount (1966), Staiger (1965a,b), and Strom (1964, 1965) also included research sections on reading. Short, integrative articles which analyzed research and suggested applications for the classroom teacher appeared regularly in the *Journal of Reading*. Such articles provide an important integrative function and those which appeared during the period of this review are listed under the appropriate sections. The *Journal of the Reading Specialist* presented an abstract series of studies pertaining to different aspects of reading at

* The resources of the ERIC Clearinghouse on Retrieval of Information and Evaluation of Reading, located at Indiana University, were used in compiling this review.

all levels (1965a,b,c; 1966a,b). Schneyer (1964) reviewed 36 studies in an attempt to examine the nature and direction of significant research at the secondary level. His analysis included critical, integrative evaluation of studies in six broad areas.

Dissertations on reading are of varying quality, and many never appear in print. A number of sources continued the identification of dissertations for those individuals interested in pursuing these as valuable sources of research ideas. A growing number of dissertations reported relate to the secondary level. Fay, Bradtmueller, and Summers (1964) classified over 700 theses for the period 1919 through 1960 under 34 headings, with a summary statement for each heading. Theses completed during 1961, 1962, and 1963 were organized and annotated by Summers (1963b,c; 1964b) and Summers and Hubrig (1966a,b).

Program Description and Evaluation

The evaluation of reading needs in secondary populations and studies assessing the effectiveness of reading programs of various types constituted a good proportion of the research reported for the three-year period. Peyton and Below (1965) used reading scores of 3,250 high school students and questionnaires completed by 95 high school principals to determine the reading needs of Kentucky high schools. They concluded that developmental, corrective, and remedial instruction should be implemented at the secondary level. Principals' questionnaires indicated an intense awareness of the need for instruction, but comparison with programs in existence revealed a wide dichotomy between need and implementation. The most common difficulty reported in developing programs was obtaining and keeping qualified staff. Cooper (1964) compared the level of reading achievement of white and Negro students in a sample comprising about one-third of the fourth- through twelfth-grade population of the county school systems in Georgia. Test scores of 30,000 students on the *California Achievement Test* revealed a successively greater discrepancy between reading achievement and expectation with each grade for Negro and white students. White students were consistently more proficient in vocabulary and comprehension and exhibited greater variability of achievement at each level.

In a study noteworthy for its statistical control, Nasman (1966) examined the long- and short-term reading growth of students in grades 7 through 9 participating in a six-week reading improvement program offered by a reading instructor through language arts classes in two suburban junior high schools. Comparisons of *Gates Reading Survey* scores, using analysis of covariance controlling on scores from the *SRA Primary Mental Abilities Test*, revealed significantly greater reading growth for the experimental group. Further analysis using the *t*-test also indicated

significant growth from pre- to post-tests for the experimental group. A significant loss was reported six months after completion of the program. Analysis also revealed significant retention seven and one-half months after the start of the program. The program was not equally effective for all three grades: the ninth grade made the greater gains. No significant differences were found when the total group was stratified into three ability levels, when sex comparisons were made, or when morning and afternoon classes were compared. Cawley, Chaffin, and Brunning (1965) reported a study of two groups of junior high school students which were taught two somewhat standard developmental programs by a reading teacher for 25 minutes each day for one semester. *Iowa Silent Reading Test* scores revealed a mean reading grade increase of a year and a half for the semester of instruction for both groups. Follow-up tests at the end of the second semester showed an additional gain of about eight-tenths of a grade for both groups. Although control groups were not utilized, the overall gain of better than two years in reading, including gain during the noninstructional period, suggested that the program was effective. Cawelti (1963) analyzed the nature of reading improvement programs through an interview technique with principals or faculty responsible for instruction in reading in 42 Midwestern high schools. More than half of the selected schools were attempting to improve reading abilities of students. A typical school required a semester of instruction for students with reading problems while participation in developmental programs was on a voluntary basis. Lack of trained personnel was again the most significant factor limiting development. Simmons (1963) surveyed reading practices using a stratified random sample of schools in the upper Midwest. Results reinforced previous observations relating to the discrepancy between programs in operation and the need for such programs. The debilitating effect of lack of trained personnel at the secondary level was also underscored. Glock and Millman (1964) used control groups to determine the immediate and long-term effects of a program for high school juniors which incorporated reading, speaking, listening, and writing. The instructional program had no effect on improved grade averages for the experimental group. Gold (1964) reported no significant differences between an individualized approach and a group approach for underachieving tenth-grade students. Starkman (1965) reported that a developmental reading program produced significant improvement on a standardized reading test but did not show positive transfer to performance on the *Scholastic Aptitude Test*. Significant gains in reading achievement for five groups of tenth-grade students, after exposure to a typical six-week developmental reading course offered in conjunction with English classes, were reported by Summers (1961c). Cooperation in instruction between English teachers and the developmental reading teacher provided valuable in-service training in reading for the language arts faculty. The effects of an intensive vocabulary training program on the reading and general

achievement of college preparatory students were examined by Jackson and Dizney (1963). Thirty-five instructional sessions 50 minutes in length, spread out over 27 weeks, produced no significant differences for the experimental group. In a concise review, McDonald (1965a) critically examined the research related to measuring the effects of reading programs and concluded with a list of questions assessing the effects of reading programs useful in planning evaluation.

Additional References: Applebee (1966); Campbell and Knill (1965); Coston and Merz (1964); Hollingsworth (1964); McConihe, Prien, and Svetlik (1964); Marquis (1963); Truckey and Knill (1965); Wright (1966).

Reading in Content Areas

The improvement of the teaching of reading in content subjects continues to be one of the major needs in implementing truly effective secondary programs. Examination of previous research reveals hundreds of studies in this area. Recent studies continue in areas of previous interest often utilizing newer teaching approaches and unique or more sophisticated measuring techniques. Michaels (1965), using an introspective technique to collect data, studied how students perceived reading difficulties in literature, history, chemistry, and plane geometry to determine common reading skills and to develop a multisubject matrix of reading difficulties. He asked 186 eleventh-grade students to write responses to four questions: (a) What kind of reading assignments do you usually have in this subject? (b) What is your usual method of reading an assignment in this subject? (c) What reading difficulties do you have in doing your reading assignment in this subject? (Discuss in detail.) (d) List your major subjects in the order of reading difficulty from the most difficult to the easiest. Questions could be raised about the validity of the introspective approach. However, the pragmatic technique of asking an individual to introspect on his difficulties in an attempt to identify problem areas can be a useful device, particularly when used in conjunction with other more objective techniques. Although data were presented only for the history area, this report is indicative of the wealth of useful information which can be collected through an introspective technique. The matrix of reading difficulties obtained from student introspection is interesting when compared to other objective formulations of content skills and difficulties. Continued exploration of the use of subjective techniques for identifying reading skills and difficulties should provide an increasing volume of future research.

In an attempt to evaluate teacher understanding of reading skills, Braam and Roehm (1964) asked representative teachers from nine subject areas in 16 schools to respond to a three-part questionnaire. Responses were

elicited in the areas of (a) teacher understanding of reading terminology and awareness of strengths, weaknesses, and limitations of students; (b) differential awareness of terminology, strengths, weaknesses, and limitations across the nine subjects; and (c) the effect of formal instruction on awareness of terminology, strengths, weaknesses, and limitations. The greatest number of responses came from teachers of mathematics and English; an approximately equal number of responses came from teachers of subjects traditionally considered to require large or small amounts of reading. One interesting fact was the apparent discrepancy between skills listed as necessary by teachers and those listed as necessary by reading authorities. Teachers mentioned only 12 of the 30 skills enumerated by the typical authority. The responses to the three areas of the questionnaire were analyzed in detail. One dismal fact learned in numerous other studies is again substantiated: the effect of formal or in-service training programs does not appear to increase teacher awareness of reading skills or of students' strengths, weaknesses, or limitations. The important area of graduate training for teachers beyond the initial degree still requires more creative and realistic treatment.

Call and Wiggin (1966) used experimental and control groups of second-year algebra students, matched on reading, verbal aptitude, mathematical reasoning aptitude, and intelligence, to determine the relationship between students' ability to solve word problems and presence or absence of reading skills. The authors concluded that additional instruction in reading skills contributed significantly to the development of skill in solving word problems. In the content area of English, Strang and Rogers (1965) conducted a carefully controlled study designed to elicit the reading processes related to students' reading of short stories. Interpretive responses gained through structured and unstructured interviews from three classes of eleventh-grade students of low, average, and high ability were used. Questionnaires determined student attitudes toward reading short stories and toward reading in general, familiarity with short stories and authors, and the lasting impression made by the short story in question. Differential results were obtained on high- and low-level readers. The authors concluded that introspective techniques can be quite effective as a means of obtaining data.

Tatara (1964) studied the effect of novels on attitudes toward scientists held by senior students. Reading of selected fiction about scientists did have positive effect on student attitude toward scientists, although wide variation existed in the total group studied. Weaver and Black (1965) related the extent of reading science fiction to the development of scientific reasoning ability. The use of an author-constructed science fiction inventory revealed no significant differences between science fiction readers and nonscience fiction readers on science reasoning abilities.

Additional References: Herber (1964); Shafner (1965); Summers (1964).

Factors Related to Reading Achievement

Studies exploring the relation of achievement in reading and reading ability in secondary populations with various cognitive, affective, psychomotor, and sociological variables continue to appear in the literature. Harootunian (1966) reported correlations between scores on tests measuring seven intellectual abilities suggested by Guilford's structure of intellect and either one or two reading tests for seventh- and eighth-graders. Russell (1965) reported a thoughtful, integrative review of research on the process of thinking structured around six categories—perceptual thinking, associative thinking, concept formation, problem solving, critical thinking, and creative thinking—with the suggestion that a more demanding set of goals for reading instruction could be structured around these categories.

A number of studies examined various physiological correlates of reading achievement such as sex differences. McGuigan, Keller, and Stanton (1964), Parsley, Powell, and O'Connor (1964), and Parsley and others (1963) studied the influence of covert language responses on reading achievement. In comparing over- and under-achieving seventh-graders on variables other than intelligence, Carter (1964) concluded that better readers have higher grade point averages, report better study methods, are happier in school, and are more planful and systematic about getting schoolwork done. Even with intelligence held constant, levels of competence in reading were found to be associated with attitudes and habits significant for school achievement. After critically reviewing research relating socioeconomic status to reading disability, Chandler (1966) concluded that a number of significant questions have yet to be answered before some of the socially oriented correlates of reading disability can be resolved. Ennis (1964) indicated that, as yet, there has been little sociological research on reading that provides insight into this area.

Descriptions of the basic assumptions underlying the substrata-factor concept of reading were provided by Holmes (1965). Singer (1965) summarized research support for the concept, and Raygor (1966) and Sparks and Mitzel (1966) presented critical reactions.

Additional References: Borg (1965); Devine (1966); Kelly, North, and Zingle (1965); Otto and Fredricks (1963); Rosen (1965); Sinks and Powell (1965).

Reading Skills and Achievement

Improvement of reading rate and flexibility continues to receive considerable attention in the literature on secondary reading. In an excellent critique of research, McDonald (1965b) analyzed the major questions related to developing rate and flexibility. In recent years a trend toward

acceptance of the concept of training in flexibility, rather than training in rate per se, has appeared. McDonald concluded that the concept of flexibility involves rate, but other variables should be considered in training such as facility of association, perceptual freedom, and attitudinal sets. Developmental reading research is apparently moving beyond the simple days of "read faster, comprehend more." Gacke (1963) examined predictors of rate improvement including intelligence and perceptual speed and closure using junior and senior high school subjects. Davis (1964) described the results of a multiple-regression study which demonstrated a significant relation between measures of physiological functioning in the substrata-factor theory and speed of reading.

Berg and Rentel (1966) reviewed recent research on improving study skills and habits. They pointed out limitations in the definition of study skills, lack of research evidence to validate study skills teaching materials, the effect of study skills training on students, the value of various recommended study techniques, and the effects of motivation and interest on study habits. Bloomer and Heitzman (1965) used pretesting and cloze procedure to determine the relation between information presented to the student and his comprehension of material. Interestingly enough, they suggested that pre-information may have a negative effect on motivation to learn. A review of the use of the cloze procedure as a tool for research was compiled by Hafner (1966). Research on development of a two-part test to measure students' ability to read for different purposes and to ascertain how students read for differing purposes was described by Smith (1964).

In an experiment involving experimental and control tenth-grade English classes, Livingston (1965) concluded that data from the Watson-Glaser Critical Thinking Appraisal provided validation for the supposition that students' critical reading ability can be improved through instruction in semantics. Some aspects of the vocabulary of independent secondary students were examined by Traxler (1965). Data from a vocabulary test were used to compare vocabulary in independent schools and public schools and to correlate vocabulary and grades in different subjects and vocabulary and reading ability in independent schools. Kingston (1965) presented a critical review of research related to vocabulary development with implications for classroom application.

Working with seven methods of presenting statistical information, Feliciano, Powers, and Kears (1963) showed that writers, editors, and specialists in popular publications could improve comprehension of statistical material by using the following methods (most to least effective): (a) horizontal grouped bar graph reinforced with text, (b) short and simple table reinforced with text, (c) graph without textual reinforcement, and (d) short table without textual reinforcement. Tables and graphs gained in effectiveness as they were reinforced by textual commentary. Casting tables into prosaic text was the least effective of all methods tested. The proposi-

tion that stimuli, presented pictorially, are superior to the printed or spoken word in facilitating learning was examined by Bourisseau, Davis, and Yamamoto (1965). The responses of urban tenth-, eleventh-, and twelfth-grade students indicated that pictures appear to be more restrictive than words in a person's information processing system. The concept "A picture is worth a thousand words" as a justification in visual presentation should be re-evaluated. The authors suggested further research in exploring intra-individual differences exhibited by older adolescents in their differential response to stimuli.

Two methods of teaching reading comprehension to high school and college students were evaluated by Raygor and Summers (1963). Programmed material was contrasted with more conventional materials in teaching students elements of reading for the main idea. Kingston and Wash (1965) and Summers (1965) provided rather complete, critical, and integrative reviews of the current status of programmed instruction and the teaching of reading skills. Research on the measurement of reading skills and achievement was reported in a number of studies and reviews. McDonald (1964b) compiled a review of research on use of standardized tests to determine reading efficiency aimed at practical classroom application by teachers. He succinctly presented different research studies relative to time limit and power tests. Karlin and Jolly (1965) investigated the use of alternate forms of standardized tests and concluded that a need for alternate forms still exists in testing. Rankin (1965) discussed the residual gain technique as a method of measuring individual differences and gain in reading improvement.

Research on techniques for assessing the readability of materials continues to be of interest. A number of studies continue previous avenues of exploration. Jacobson (1965) determined through an analysis of difficult words that 16 physics and chemistry textbooks were too difficult for students to understand. Covariance and regression analyses were used to obtain equations to predict difficulty of physics and chemistry texts. The dependent variable was the average underlining score of difficult words with several other conventional indices of difficulty of material used as dependent variables. Louthan (1965) examined the effects of systematic grammatical deletion on comprehensibility of reading materials. Snortum (1964) explored the effect of rewriting material judged to be difficult by the Flesch formula on the comprehensibility of the material. The two most influential developments in readability during this period were the publication of a comprehensive review and summary of findings concerning readability and its measurement by Klare (1963) and Bormuth's (1966) report of his experimental work. The Klare text includes practical information on applying various formulas and the historical development of readability measures as well as evaluative information on sampling, analyst reliability, and validity of readability formulas. Bormuth investigated five problems related to the development of precise readability formulas and

evaluated the utility of new linguistic variables, previously studied variables, and refined versions of previously studied variables. Bormuth attacked a wide range of problems in readability, beyond the reach of earlier research methods, by the use of newer techniques in psychological measurement, linguistics, statistics, and data processing. This research should open a new era in developing more precise measures of the difficulty of reading materials.

Additional References: Aukerman (1965) ; Lee (1964) ; Millman (1963) ; Noall and Ceravolo (1964) ; Spaight (1965).

Development of Interests, Tastes, and Attitudes

Continued exploration into the effect of reading instruction on the development of interests, tastes, and attitudes constitutes one of the major challenges in meeting needs of secondary students. The need for continued development of reading as a tool for academic success is crucial. However, beyond this the student must be exposed to reading experiences that develop permanent interests and tastes, provide insight into one's own personality and attitudes, and stimulate lifetime reading habits. Most secondary programs have scarcely begun to provide experiences which adequately fulfill this broader instructional goal. Shores (1964) used a nationwide sample and open-ended inventory questions to determine (a) what high school students are looking up in books, (b) what they want to read about, (c) what they want to find out about, (d) whether or not teachers have a realistic picture of reading interests and informational needs, and (e) trends in the relative strength of reading interests and informational needs in comparison with earlier grade levels. As a source of encouragement, Shores concluded that midtwentieth-century youth express considerable interest in national and international problems. Junior and senior high teachers consistently underestimated the interests of youth in social science and overestimated their interest in personal and social problems. To determine the impact of books on recently graduated, superior high school students, Whitman (1964) used a questionnaire asking 2,600 students in 50 states to identify one book which was more significant to them than any other and tell why they found it significant. The most significant books were novels, evenly distributed among classics, modern classic, and contemporary. Quite a few of the top 40 books had been objected to by individuals and groups. The reasons given for the significant effect of the books ranged from their value in shaping attitudes, values, and thoughts to their usefulness in providing information.

Witty and Melis (1965) summarized findings of a yearly study of tele-viewing interests of elementary and secondary students. Clarke (1965) correlated parental socialization values with different aspects of children's newspaper reading. The emotional and ideational responses of adolescents

while reading four short stories were studied by Squire (1964), who identified certain patterns of responses and certain kinds of responders. He noted the impact on interpretation of literature of individual experiences, personal predisposition, and six basic sources of difficulty which adolescents encounter in interpreting short stories. Blount (1965) used a rather unique attitude instrument to study the effect of selected junior novels and selected adult novels on student attitudes toward the ideal novel. Jungeblut and Coleman (1965) used responses from over 4,000 subjects in grades 7, 8, and 9 to identify selections that interested junior high students. Selections were classified according to type and readability level. The types of magazines and articles which appeal to teen-agers were identified by Stewart (1964). Soares (1963) attempted to determine whether recreational stories which rated high in interest varied in appeal according to intellectual ability, grade level, and sex for junior high school pupils.

Additional References: Campbell (1964); Chu (1966); Dorney (1964); Eagly and Manis (1966); Gunderson (1964); Hughes and Willis (1965); Loughlin and others (1965).

Reading Problems

The development of more adequate measuring techniques, identification and treatment of reading problems, and evaluation of factors related to disability continued to receive attention. McDonald (1964a) noted that most work in using subtest patterns to identify reading problems has been done on the *Wechsler Intelligence Scale for Children (WISC)*. He studied the *Wechsler Adult Intelligence Scale (WAIS)* performances of 60 disabled readers of high school age to identify differences in subtest performances. He found a statistically significant difference between Verbal and Performance scale scores, with 64 percent of the students higher on the Performance scale. In general, poor readers showed low performance on subtests reflecting attention, fluency, concentration, freedom from distractibility, and school-like learning. *WAIS* scores were used by Sawyer (1965) to examine the intellectual functioning of mildly and severely disabled readers. Different subtests appeared to play different roles in discriminating between severely and mildly disabled readers when only boys were considered, as contrasted to the total group. When the group was classified by age, the ability of the subtests to discriminate declined in effectiveness as chronological age increased. Seven, rather than 11, tests proved adequate in discriminating between the two groups. Equally effective discrimination appeared to be possible by dropping the Comprehension, Digit Span, Picture Completion, and Block Design subtests. Cross validation with subjects outside the sample indicated that it was possible

to accurately classify individuals into mildly or severely disabled categories with the equations which were developed. Robeck (1964) examined the possibility of using the *WISC* as a diagnostic instrument in reading. The patterns of 80 elementary and junior high school students indicated little difference on Verbal and Performance scales. In general, persons having reading disabilities tended to show strength on judgment and ability to generalize, and weakness in recalling specific verbal material. They also tended to deal more effectively with figural than with symbolic material. Working with British students, Fransella and Gerver (1965) reported a study to develop multiple-regression equations for predicting reading age from chronological age and *WISC* Verbal IQ scores. Deal (1965) summarized 14 studies published since 1945 to discern a pattern of performance which typifies the retarded reader on the *WISC*. Arithmetic, Vocabulary, Digit Span, Information, and Coding all appear to be heavily indicative of reading success. Garlock, Dollarhide, and Hopkins (1965) used the *Gilmore Oral Reading Test* as a check on the validity of the *Wide Range Achievement Test*. The data supported the hypothesis that the *WRAT* is a valid measure of reading accuracy and/or vocabulary. Otto and McMenemy (1965) used scores of 110 retarded readers in grades 4 through 9 on the *WISC* and the Ammons *Quick Test* to determine the validity of the *Quick Test* with poor readers. The authors concluded that the test can be used by perceptive examiners to obtain useful, quick estimates of intelligence.

The incidence of articulatory defects among 40 referrals to a reading clinic was studied by Sonenberg and Glass (1965). Matched comparisons were also made of the progress of students given both speech and reading therapy and reading therapy alone. Eighty percent of those referred were judged to have functional speech defects in contrast with the low incidence of such defects among the regular school population. Greater gain in reading was noted with the group receiving speech and reading therapy. Krippner and Herald (1964) sought to determine if there are causes of reading difficulty that are more typical of the gifted student with reading problems than of the more average student with reading problems. Results indicated that the same etiological factors that affect average pupils may affect academically talented pupils in the area of reading disability. Adaptation to specific individual problems needs to be considered when developing remedial techniques for this group. A large proportion suffer from emotional problems, with some prevalence for neurological problems. In a series of related studies Lovell and Woolsey (1964); Lovell, Gray, and Oliver (1964); and Lovell, Shapton, and Warren (1964) considered characteristics of backward readers in Great Britain and listed characteristics not unlike those attributed to such groups in this country.

Additional References: Dolan (1964); Fuller (1964); Grotberg (1965); Henderson, Long, and Ziller (1965); McDonald (1964); Raph (1965); Sampson (1966); Studholme (1964); Watson (1965); Wilkerson (1965).

Summary

No one is capable of synthesizing all of the studies which have appeared on secondary reading for the past three years. Much of the research is unrelated in a larger context or more comprehensive framework. Represented here are a number of studies which have as their common focus exploration with adolescent populations into some aspect of the broad area loosely defined as secondary reading. Although recent years have seen a steady increase in the quantity of reading research, the question of the quality of the research is certainly open for debate. After reviewing the available research there would most likely be agreement that more significant work could be done. The question is, what? A recent longitudinal look at research output for the secondary level over the past 60 years attempted to empirically organize studies into categories according to the major context of the research (Summers, 1963a, 1964a). Interestingly enough, the 34 categories set forth included almost every question that could be hypothesized to be related to the extension of systematic reading instruction into the secondary schools. All of these possible questions have, at one time or another, been the focus of a research effort of some sort. What is necessary at this point is not the identification of new categories, or the addition of innovative new questions. The overriding need is for better coordination of previous effort as well as an attack in new directions on the questions consistently raised but not yet satisfactorily answered.

These questions have been asked largely in singular instances by unrelated researchers involved in isolated efforts. If continuous developmental instruction in reading throughout all the years of exposure to schooling is a legitimate goal, and not a myth, then multiscale research as to how this objective can best be effected is needed—multiscale with respect to theory, not sheer quantity. There has been an ample amount of that. Speculation and imagination is needed in outlining the "givens" and the "unknowns" and mapping the total needs in secondary reading. A listing of two dozen isolated questions in need of research is not the answer. If the questions are related to a tentative mosaic of objectives, replete with testable hypotheses which isolate and explore the most pressing problems, then results may be worth the effort. Research could provide significant answers. What is needed is a speculative, comprehensive statement of the total milieu within which secondary reading instruction operates. This should be followed by organized, concerted research efforts of a well-designed, exemplary nature that would be carried out by interdisciplinary teams backed by adequate funding. The various categories of this review and some of the consistent problems which have been raised repeatedly within the research reported could perhaps be the starting focus of such effort.

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CHAPTER IV

Listening

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The importance of listening in communication has long been recognized. Although listening is seldom taught in the schools, researchers and educators have been aware that more time is spent in listening than in other components of the communication process, and that most school instruction occurs in a speaking-listening context. Research in listening has been extensive, though generally atomistic, uncoordinated, and repetitive. A trend of recent studies in listening has been to re-examine previously studied topics; and although some have explored new topics, all have contributed in one way or another to an evolving general theory of listening. Discussions and reviews of research pertinent to an evolving theory of listening were conducted by Dixon (1964), Duker (1965), Hollingsworth (1964), and Russell (1964).

Teaching of Listening

Research in listening in the last three decades has been concerned, directly or indirectly, with some phase of instruction. One assumption which may be made from this research is that listening ability can be improved with instruction. Recent research has supported this assumption.

A representative study is that of Fawcett (1963), who created and used exercises to develop listening ability at fourth-, fifth-, and sixth-grade levels. She compared pre- and post-test scores on the *Sequential Tests of Educational Progress: Listening* comprehension test of this group with scores of a matched control group which received no instruction in listening. Analysis of her data (using analysis of covariance and *t*-tests) showed that students who received instruction in listening scored significantly higher on the listening test. This type of study, one of several investigations on the teachability of listening, suggests that general listening ability is positively affected by instruction.

Lundsteen (1963) investigated the effects of instruction on discriminating, or critical listening. She isolated and taught to fifth- and sixth-grade students three specific, critical listening skills: (a) detecting a speaker's purposes, (b) evaluating propaganda in a speaker's presentation, and (c) evaluating arguments. She then compared their performance on a test constructed for the experiment with that of students who had received no instruction and found, as in other studies, a statistically significant gain by the group which received instruction.

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Lundsteen (1965), in a follow-up of her earlier study, investigated the degree of permanence of learnings and the amount of transfer to in-school and out-of-school activities. One year later she administered the test used in the previous study to students from the original experimental and control groups, and requested that students in the experimental group write anonymously of the ways in which they had used the critical listening lessons during the year. She found that the group which had received instruction still scored significantly higher on the experimental test and that students in this group reported instances of transfer of learnings.

Factors Affecting the Teaching of Listening

Several recent studies explored factors which affect the teaching of listening and the listening process in general. The effect of teaching practices was studied by Van Wingerden (1965), who found that teachers say they spend more time teaching listening than they actually do, that they rely more on incidental than on direct teaching, and that they work with few aids and instructional materials and without pre- or in-service assistance. The effect of age was studied by Farrow (1963) and by Condon (1965), who noted that objective scores on listening tests increase with age. The influence of seating was investigated by Furbay (1965), who found that scattered seating in a room (as opposed to compact seating) resulted in listeners' tending to shift toward the thesis of the speaker's talk. Brooks and Wulftange (1964) studied the effect of interest on listening comprehension and found that interest in the materials presented and the personality of the speaker affected listening comprehension. The effect of position in and size of family was studied by Brown (1965), who found that children with older and younger siblings were not better listeners than oldest or youngest children and that children from small families were not better listeners than those from large families.

The effect of televising was studied by Edinger (1964) and by Brown (1965). Edinger found that televised lessons in listening and critical thinking were effective in improving scores on a standardized listening test, but not on a test of critical thinking abilities. Brown found that elementary school students who watched commercial television regularly scored higher on a listening test than those who did not, but found no relationship between the number of hours spent watching television and scores on the listening test.

Recent studies have also investigated the influence of personality factors on listening. Higgins (1964) analyzed scores made by the same group of subjects on two listening tests and two anxiety scales and found that (a) listening was influenced neither negatively nor positively by anxiety and (b) no substantial relationship existed between listening ability and anxiety. Ross (1964) compared listening test scores of good and poor listeners, who

were identified as the upper and lower extremes of his test population, with other variables, e.g., reading, arithmetic, personal and social adjustment, socioeconomic factors, and hearing. He found a high positive relationship between listening and all factors studied except hearing and personality (correlations between listening and personality test scores ranged from -0.28 to 0.18). Lundsteen (1965) compared scores on a personality test and scores on her experimental test of critical listening and found no significant relationship.

Several studies investigated rate of presentation and listening comprehension. De Hoop (1965a) found that speaking presentations of 210 words per minute (wpm) yielded better results for mentally retarded students and for students with limited sight; and, in a second study (1965b), that 175 wpm yielded significantly better results for cerebral palsied students. Spieker (1963) found that 125 wpm and 175 wpm yielded better results for both mentally retarded and intellectually normal students. A study by Orr, Friedman, and Williams (1965) gave added support to the widely held assumption that speaking rates can be increased without loss in listening comprehension. They found that time-compressed speech at rates up to 475 wpm produced no significant loss in comprehension.

Listening and Reading

It has long seemed apparent to many investigators that a relationship exists between listening and reading. These behaviors are related as each is concerned with the decoding half of the communication process and seems to be a complex of related skills components, e.g., reading for main ideas or transitional elements, and listening for main ideas or transitional elements. Further, it is possible to demonstrate a statistical relationship between listening and reading test scores. This relationship was stressed by Hollingsworth (1964) and Townsend (1964) in reviews of research. Devine (1964) postulated that the same higher mental processes underlie both facets of the language arts complex, and Hollingsworth (1965) pointed to the need for planned programs to exploit the relationship for teaching purposes.

However, recent studies did not completely support the assumption that listening and reading are related. Reported correlation coefficients between listening and reading were positive and high: Ross (1964) found a coefficient of 0.74 ; Brown (1965) found coefficients of 0.82 at fourth-grade level, of 0.76 at fifth-grade level, and 0.77 at sixth-grade level; both Condon (1965) and Fawcett (1963) found "high" correlations; Duker (1965) reported an average coefficient of 0.57 . Other recent studies (not reported here) of tests used to establish such correlations suggested that the tests may be measuring something else than, or in addition to, listening ability. It may be advisable to delay further correlational studies

between listening and reading until instruments for measuring pure listening ability are available. It may also be wise to interpret coefficients of relationship between listening and reading with the limitations of listening tests in mind.

Reeves (1965) investigated the effect of specific instruction in listening on reading performance. She used recorded listening lessons with fourth-grade students and found no significant differences between mean gains of listening and reading scores of the experimental group, which had instruction in listening, and the matched control group, which had no listening lessons. Lewis (1963) used listening exercises with college freshmen and found no significant differences between listening and reading scores or between the reading scores of those who had instruction in listening and those, in a matched control group, who did not. Hollingsworth (1965), working with eighth-grade students, found no significant differences between reading scores of those who had listening instruction and those who did not.

Still, a relationship between listening and reading does seem to exist, and despite recent studies to the contrary, it certainly seems worthwhile to continue the investigations into the nature and extent of this relationship. Future studies might explore the relationships between specific listening skills (e.g., listening to follow the speaker's plan of organization, or listening to recognize a speaker's inferences) and specific reading skills (e.g., reading to follow a writer's plan of organization, or reading to recognize a writer's inferences). Research in this area of listening seems to have barely scratched the surface.

Other Correlational Studies

The apparent relationships of listening and speaking and of listening and intelligence also need further study.

Lawson (1964) stressed the relationship between listening and speaking and suggested that the development of the listener function in an individual "probably plays an important role in the ultimate development of his skill as a speaker in being able to order verbal behavior." Brillhart (1965) found no evidence of positive correlation between certain kinds of listening and speaking activities. She found that the ability to tell listeners how to draw certain geometric figures was unrelated to the ability of the same subjects to listen to spoken directions for drawing geometric figures.

Support for the assumption that listening is related to intelligence remained, in recent studies, at the level of test score correlations. Ross (1964) found correlations of 0.76 between listening test scores and verbal intelligence scores and of 0.25 between listening scores and nonverbal intelligence scores. Brown (1965) reported correlations between listening and intelligence ranging from 0.82 at the fourth-grade level to 0.76 at the fifth-grade

level and 0.77 at the sixth-grade level. Anderson and Baldauf (1963) found a correlation coefficient of 0.58 between listening and intelligence test scores.

Measures of Listening Ability

Research studies in listening are generally predicated on the assumptions that (a) listening ability can be measured and (b) effective measuring instruments exist. Recent studies raised serious questions about the research use of the two most widely used standardized tests of listening.

Anderson and Baldauf (1963) analyzed the *Sequential Tests of Educational Progress: Listening* (Form 4), and they came to the conclusion that estimates for reliability fall below minimal acceptable levels for tests used for individual evaluation. Also, heavy loadings in verbal comprehension suggested that achievement on the test may be a matter of verbal comprehension and not listening as a distinct ability, and that the test had no general utility in an overall standardized achievement battery. They pointed to the need for valid, reliable measures of listening comprehension. Langholz (1965) studied the *Brown-Carsen Listening Comprehension Test* and reported that listening efficiency scores on the test reflected, in part, the difficulty of the individual item, that interpretation of listening test scores should be based upon the difficulty index of test items, and that the test can be improved by the application of basic question refinement techniques to decrease item difficulty by increasing the clarity and comprehension of items. Kelly (1965) in a study of both tests concluded that the construct validity of each was questionable because the two tests failed to correlate significantly higher among themselves than with reading and intelligence tests.

In general reviews of listening research, Dixon (1964) noted the lack of adequate tests in listening and pointed out that more effective measures are mandatory in evaluating methods, materials, and programs in listening; while Russell (1964) suggested that a source of such tests is in unpublished theses and dissertations in which individuals have constructed tests but not carried them beyond one or two revisions.

Summary and Comments

Recent studies in listening have further explored previously studied questions. Their value, generally, has been to support and refine existing assumptions about the teaching of listening and the listening process. It seems increasingly clear that (a) listening ability can be improved by instruction; (b) listening is affected by such factors as maturity, rate of presentation, and the intrinsic interest of materials presented; and (c) listening is, in some way, related to reading. Recent studies have found

that (a) learnings in listening can be permanent; (b) personality factors (i.e., those revealed in various tests) do not influence listening, seating in a room does affect listening, position in the family does not affect it, listening comprehension can be influenced positively by televiewing; and (c) correlations between listening and speaking may be negative. Other recent studies have raised serious questions about the validity and reliability of widely used tests of listening comprehension.

Still needed are more studies of (a) critical listening, (b) the relationships between specific listening and reading abilities, (c) ways of exploiting possible relationships for teaching purposes, (d) teaching techniques and materials, (e) personality factors which may influence listening, (f) ways in which listening instruction affects behavior, and (g) measuring devices in listening.

Investigations of the relationships between listening research and linguistic research are needed. Topics which should be investigated are listening and regional dialects, listening and cultural-social levels, listening and syntax, and listening and transformational grammar.

Recent studies have contributed much toward an, evolving theory of listening, but many questions remain unanswered. Indeed, certain significant questions about listening may still remain to be asked.

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CHAPTER V

Written Composition

WILLIAM W. WEST

Kitzhaber (1963) commented that we need to know a great deal more about the writing process and the teaching of writing. "We need," he said, "fifteen or twenty years of the same kind of intense activity by bright minds that has recently benefited the study of language and the study of literature." Braddock, Lloyd-Jones, and Schoer (1963) reminded their readers of the need for research in composition by itemizing under the heading "Unexplored Territory" fully 24 issues within the teaching of writing for which there is little or no research.

Unfortunately, as one surveys the results of three years of research in composition he becomes convinced that Kitzhaber underestimated the time needed to bring research in written composition to a respectable level; 15 or 20 years of the same amount and type of research as that accomplished in the last 3 years will not do the job. Unlike many other fields in which the basic research has been done, written composition does not offer the security of sure knowledge upon which to build additional studies. The basic problem of judging the worth of a composition, for example, has not yet been solved; therefore any study depending on accurate, objective, and impartial weighing of compositions is automatically suspect. This observation is not intended to denigrate the fine work which has been done by a limited number of composition investigators, but it does emphasize the fact that research in written composition remains in a kind of pre-scientific era. The virtual impossibility of scientific measurement of composition today deters many "bright minds" who might otherwise be willing to contribute research.

The Braddock, Lloyd-Jones, and Schoer study (1963) promised to usher in a new era of composition research, specifying as it does ground rules for today's most scientific composition research, listing the 504 most useful studies from more than 1,000 originally examined, and presenting 5 outstanding studies as paradigms for future efforts. Nonetheless, the total of studies in composition is significantly less than for reading.

An interesting revelation from Applebee (1966) was that, contrary to the recommendations of many experienced educators, English teachers spend much less than one-third, let alone one-half, of their class time on the study of composition. Of the 32,580 minutes observed, about 15.7 percent were spent teaching composition. Tenth-grade classes spent 13.9 percent of their time on composition; twelfth-grade classes spent 15 percent; and terminal classes, as opposed to college-bound classes, spent 15 percent of their time studying composition.

Additional References: Blount (1966): Lewis and Lewis (1965): Petty and Burns (1964, 1965, 1966): Staiger (1965): Strom (1965): Thomas (1963).

Evaluating Composition

Although the evaluation of composition would seem to come last in the composition process, it is first in importance for greater progress in composition research. Diederich (1966) proposed that pre- and post-measures be abandoned and that monthly composition grades be totaled throughout the year. The use of the large number representing the accumulated scores from perhaps 10 compositions would result in individual and class scores which could yield statistically significant figures. He offered a simple efficient plan for evaluating the effectiveness of the composition program in an entire school by mixing papers from all grade levels together, identifying them by number only, and rating them according to the "Diederich" scale.

Fostvedt (1965) attempted to validate a composition scale made up of principal elements from the nine most popular recently published scales: those of William Dusel; the California Association of Teachers of English; the College Entrance Examination Board; Educational Testing Service; the Illinois Association of Teachers of English; the Indiana Association of Teachers of English; the National Council of Teachers of English; and Grose, Miller, and Steinberg. From these scales he drew several common, though not discretely listed, items. These he validated by referring them for ranking to nine college teachers of English and then to a group of high school teachers. Both groups ranked the items in this order: development of ideas, coherence and logic, organization, diction, and emphasis. Finally, he referred every thirteenth theme from a collection of 256 written by four high school classes (a total of 20 themes) to 30 teacher experts for grading by the scale. Despite the teachers' commitment to the idea of an objective measure and despite the effort to provide such an objective scale, reliability was not found.

Though aiming more at developing a research tool than an everyday evaluation instrument, Armstrong (1965) attempted to develop an objective measure for rating fifth-grade compositions. He used frequency counts of the number of words used, the communication units, the words per communication unit, the value of words according to the Rinsland List, an abstraction score, the number of kernels per communication, the number of different communication units used, and the percentage of linking verb patterns used in the communication units. The differences in the compositions were probably due largely to the subjects upon which they were written: yet he found that fully 10 percent of the total variance was due to undefined elements. Carlson (1965) attempted to find a measure of origi-

nality. By analyzing 500 published samples of children's narratives, she determined as her categories of originality story structure, novel or unusual qualities, emotional tone, uncommonness of response, and story style. Within each of these categories she placed illustrative items and samples. By referring to 2,000 stories by intermediate grade children, she collected additional illustrations for each category. Finally, she evaluated 3,000 additional student narratives to determine whether or not she needed additional categories.

Additional Reference: Hunt (1965).

Teaching Methods

The greatest number of research studies was aimed at the actual teaching process. Burton and Arnold (1963) took a close look at the extent to which frequency of writing and intensity of teacher evaluation affect performance in written composition. In two Florida high schools, two teachers in each school taught one control and three experimental tenth-grade classes. The control groups wrote one theme every six weeks, with moderate evaluation. The first experimental group wrote infrequently, with intensive evaluation; the second wrote frequently, with moderate evaluation; and the third wrote frequently, with intensive evaluation. From scores on the *Sequential Tests of Educational Progress (STEP)* writing and essay tests and the quality of final compositions as rated by three certified, experienced English teachers, the researchers concluded there is no evidence (a) that intensive evaluation is more effective than moderate evaluation, (b) that frequent practice is in itself a means of improving writing, (c) that one combination of writing frequency and evaluation intensity is more effective than any other, and (d) that one combination of frequency and evaluation is more effective for one ability level than another.

In a somewhat similar study, McColly and Remstad (1963) reached the same conclusion regarding the efficacy of frequent writing in improving student performance. Working with 295 students in grades 8 to 12 at Wisconsin High School, they investigated the problem of whether or not infrequent writing, frequent writing, infrequent writing and functional instruction in writing, frequent writing and functional instruction in writing, or frequent writing plus tutoring would result in greater improvement in composition performance. When terminal compositions by all groups were rated and the results analyzed, the researchers concluded (a) that frequency of writing alone does not produce the greatest improvement in writing, (b) that functional writing activities can best be used to improve composition skills, and (c) that teachers can greatly reduce the time they spend in 'tutoring' writing and conferring about composition if they give adequate functional instruction in the classroom.

Two other studies seemed to lend additional support to those who question the "theme-a-week" assumption. Wheeler (1965) hypothesized that if one replaced weekly theme writing with reading, then reading and careful discussion of selected essays would be of greater value than would student-selected free reading. Three teachers, working with six junior classes, were each given one experimental class and one control class. Four of the classes were "low junior students of average ability," and two of the classes were "low junior students of high ability." Classes were matched on the basis of *Differential Aptitude Test (DAT)* verbal score rankings and the students' previous English grades. The control students wrote one composition every three weeks, spending the released time in close reading and evaluation, careful revision of their compositions, and discussions and analyses of peer papers. From scores on the *STEP* Writing Test, Form 2A, and on the teacher-constructed essay test marked by five or six teachers on a scale of 1 to 4, Wheeler concluded that there was no reason to consider the ability groups differently, that the theme-a-week assumption was not justified, and that though student improvement in all groups was similar, careful reading of essays and analytical discussions of ideas worked better than in-class writing to promote critical thinking ability. Working at the college level, Christiansen (1964) discovered that an experimental group writing 24 compositions, not using the usual freshman composition reader but handling writing strictly from the point of view of composition, performed at the same level as a control group which wrote only 8 compositions but analyzed freshman composition reader selections. Both groups improved in reading ability.

Additional References: Braun (1963); Laubner (1964); Meckel (1963); Shane and Mulry (1963).

Stimuli for Writing

Several studies looked at different ways in which the stimulus for writing influenced student production. Nelson (1965) used a group of six- and seven-year-old children at the University of California at Los Angeles University School to investigate over a period of 10 months the effect of a wide variety of topics on vocabulary and verbal output. She discovered a wide range of individual differences and great variation from assignment to assignment, although the same topic given to students at short intervals produced about the same amount of writing. She concluded that there is a qualitative difference in writing as a function of the topic assigned, but that early success transfers to a later situation and may minimize the influence of the immediate topic.

Carlson (1963) also examined the influence of different kinds of stimuli for writing. She divided 217 subjects into two matched experimental and control groups for 10 weeks of instruction. The experimental group was

stimulated to write by lessons exposing them to books, records, pictures, and toys, whereas the control group stimuli were limited primarily to story titles. Each student's weekly paper was judged according to a General Impression Scale and an Analytical Originality Scale created by the investigator. After the fourth lesson, the experimental group scored higher on originality, versatility of vocabulary, and total number of words used. The groups seemed to converge again toward the end of the experiment.

Jenks (1965) used her Demopraxis Journal method for four months with three experimental groups at the tenth-grade level, while her three control groups were stimulated to write by the usual methods. The Demopraxis Journal method consisted of having each student keep a list of composition ideas; a daily journal with three weekly essays focused on a single subject, mood, or opinion; a personal manual; a spelling list; and extra credit manuscripts. Brainstorming for ideas with the group was an intrinsic part of the experimental method. From the Imaginative Stories Task of the Minnesota Tests of Creative Thinking and from student writing, Jenks judged that the systematic attempt to stimulate creativity by the Demopraxis Journal method was more effective than the usual system and that parental background did not influence its effectiveness.

The question of whether students benefit more by conscious attention to the composing process and to systematic planning than by affective commitment to communication has not yet been settled. Rohman and Wlecke (1964), however, discovered that at the college sophomore level, experimental groups given a six-unit curriculum on "prewriting" produced better compositions and demonstrated a better attitude toward composition both as indicated in their observed responses and in their expressed attitudes. The experimental group which had learned about "prewriting" analysis and organization stressed ideas and directed thought, whereas the control group still saw composition as an "extrinsic" problem and was worried about mechanical details.

Working with second-grade children, Barnes (1964) gave his 45 experimental students 60,000 small word cards and 100 grooved boards for use in assembling the words into sentences. After 16 weeks the experimental children wrote longer stories, used more varied words, and displayed greater imagination than the controls. Despite the problem of making the huge number of word cards available to students, the teachers liked the system.

The Teacher's Attitude

Educators have long insisted that a receptive and encouraging attitude on the part of the teacher will produce better creative work of all kinds from students. Two studies reinforce that idea. Nikoloff (1965) gave 100 fifth- and sixth-grade teachers in Niagara Falls a Writing Standards Inven-

tory and then asked the students of these same teachers to fill out another form which revealed their interpretation of their teacher's writing standards. The term *high standard* was used arbitrarily for a teacher who emphasized spelling, neatness, and conventions; and *low standard* was used for a teacher who emphasized ideas and originality. The work of five boys and five girls picked at random from each teacher's class was judged by a panel of readers. They discovered no statistically significant difference in the work of the children from "low" and "high" standard teachers; but they discovered that students of "low" standard teachers wrote more words, had more ideas, had more rare ideas, and possessed slightly higher overall qualities than students of "high" standard teachers. The former group likewise made fewer errors in spelling, capitalization, and punctuation.

Using 105 fourth-graders, Taylor and Hoedt (1966) had three teachers handle the papers of half the students by giving them praise without correction. They gave the other half criticism with correction. In order that the comments accorded the two groups would be equal, the comments on papers of the first group were checked against the comments on papers of the second group. For any item on which the second group received correction, a corresponding item of praise was arbitrarily bestowed upon one of the papers in the first group. Papers of the students were judged on a Quality Evaluation Scale and the number of words produced by the children checked for the quantity of writing. From observation and check sheets, the children's attitudes were assessed. Although the groups were about equal in writing improvement, the group receiving praise without correction wrote more and had more favorable attitudes. The investigators concluded that children's work will not deteriorate if criticism and correction are withheld in favor of praise.

Grammar and Composition

Although most previous research indicated very low, if any, correlation between a knowledge of grammar and the ability to write, several studies between 1963 and 1966 indicated a relationship. Both Klauser (1964) and White (1964) used structural linguistics with junior high students. White found that, with seventh-grade classes from a mixed socioeconomic background, instruction in structural linguistics resulted in more improvement as measured by the *STEP* writing and essay tests and by student compositions than did instruction in traditional grammar or no grammar instruction at all. Klauser used one experimental and one control group at each junior high school level, and from the results of a teacher-made grammar test, a comparison of initial and final compositions, the *STEP* Writing Test (Forms 3A and 3B), and a questionnaire, he discovered that the seventh- and ninth-grade experimental groups gained in their understanding of effective writing, but at the eighth grade there was no significant differ-

ence. The seventh-grade group using traditional grammar gained more in accuracy of writing.

At the Ohio State University campus school, Bateman and Zidonis (1965) taught generative grammar over a two-year period to 50 ninth-grade students. Six initial compositions were compared with six final compositions, and the grammatical structures in the total of 70,000 words, 1,731 sentences, and 8,533 transforms were examined and classified. The study of generative grammar, because it is consistent, specific, and relevant to writing, seemed to have a significant effect upon the ability of students to produce varied, well-formed sentences.

Though the studies sketchily reported here are but a selection from among perhaps twice as many undertaken, and though the quality of these few is noteworthy, research in composition during this three-year period has fallen yet another step behind research in other fields. Where are those bright minds to provide the intense activity in this important field?

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CHAPTER VI

Handwriting and Spelling

THOMAS D. HORN

The studies reviewed in this chapter were, for the most part, reported during the period from July 1963 through June 1966. However, a few studies reported outside the foregoing time span are included to provide better continuity between the 1964 reviews and those summarized here. A committee of the National Conference on Research in English (1966) prepared a bulletin on research on handwriting and spelling composed of 10 articles reprinted from *Elementary English* in 1964, 1965, and 1966. To better identify the authors, the articles included in this bulletin are listed here either as bibliographic or additional references, depending on whether or not the primary focus of the article was on experimentation.

The current status of research in spelling and handwriting is reflected in the continuing low level of interest and activity on the part of educators. For example, Staiger (1965) reported on 454 language arts research studies either completed or in progress during 1964, more than double the 221 studies reported for 1962. However, less than 4 percent of the 1964 total were studies concerned with handwriting (a total of 4) and spelling (a total of 14). Andersen (1965a,b) reported only 4 studies of handwriting since July 1963; Petty (1964) reported 1 study of spelling and 2 related studies published since July 1963; while Petty and Burns (1966) reported 5 handwriting and 16 spelling studies published during the period from December 1964 through December 1965.

Problems of research design and data analysis have remained unsolved in handwriting and spelling studies at the master's level. Present research limitations are the same as those brought to the attention of this writer at least 25 years ago: (a) fuzzy purposes and naïve application of statistical analyses, (b) use of inadequate designs with elaborate statistical analyses for very practical instructional problems, and (c) adequately designed studies of pressing instructional problems using sophisticated statistical analyses. Indeed, almost every study reviewed suffered from one or more of the limitations listed below:

1. Inadequate descriptions of the experimental and or traditional methods and materials were rather commonplace. Control of time allotments for the treatments being compared appeared to be very difficult to maintain due to insufficient supervisory staff. Also, the effect of instruction in other areas on the treatments being compared was either ignored or, if recognized, extremely difficult to control or describe.

2. Although most studies recognized the learner variable in terms of IQ scores, information was generally not available on such variables as conation level, readiness factors, physical condition, and set toward learning.

3. Cultural factors which received inadequate attention included socioeconomic levels which in turn resulted in differences in the value placed on education, and bicultural factors such as Spanish- or French-speaking, Negro, and or disadvantaged pupil populations.

4. Control or description of the teacher variable was typically not reported when comparison was being made of two classrooms utilizing different treatments. The large number of studies reporting significant differences in favor of the experimental method utilizing volunteer teachers as compared to the traditional method utilizing nonvolunteers suggests an urgent need for closer collaboration between educators who have knowledge of research design and analysis and educators who understand instructional problems in elementary and high school teaching.

5. The multifaceted variable of administrative factors—e.g., organization of class with reference to instruction, duration of the study, characteristics of the classroom and school, financial support of the school, administrative support of the principal, and differences in size of class—was generally unreported.

6. In some cases the tests used to measure success may not have been pertinent to the hypotheses being tested and/or were of questionable utility, particularly with disadvantaged pupils. This condition is probably what led Buros (1965) to reiterate an earlier statement: "Bad usage of tests is probably more common than good usage. Must it always be this way? We are afraid so."

Handwriting

Anderson (1963) compared the performances of English and Scottish children to norms for American children on a series of reading and spelling tests and a handwriting scale standardized in the United States. In each country, samples of 300 pupils were selected from each of the 7-, 11-, and 14-year-old age groups. Instrumentation included the *Stanford Achievement Test*, Form J—primary, intermediate, and advanced batteries for ages 7, 11, and 14, respectively; spelling subtest of the *Metropolitan Achievement Test*; and the *Metropolitan Handwriting Scale*. The data were treated in two ways: first, sample means of West Lothian County (Scotland) and Leeds County Borough (Yorkshire, England) were compared to scores which American children of the same age would be expected to achieve on the tests; second, sample means were compared to mean scores of American children one year above the mean age of West Lothian and Leeds children in an attempt to equalize the difference in amount of instruction caused by the later school entrance of American children.

Anderson (1963) excluded comparisons of handwriting because of the lack of appropriate norms. A résumé of several trends selected from 15 which he found pertinent to handwriting follows: (a) at age 7, Leeds and West Lothian samples had mean scores which excelled the test norms for American children of the same age and the mean scores of the Pinellas County, Florida, and Jackson, Michigan, samples in virtually all comparisons; (b) both the Leeds and West Lothian samples (the West Lothian reversed at age 14) tended to lose ground with advance in age on the paragraph meaning test and the handwriting scale; (c) at ages 11 and 14, the Jackson samples tended to show greater variability than either the Leeds or the West Lothian samples on the handwriting scale; (d) at age 7, girls within the national samples had mean scores which excelled the mean scores of the boys in every comparison on all tests, although differences were not always significant; and (e) at ages 11 and 14, the girls also tended to retain an advantage on the handwriting scale, except for the West Lothian samples, with whom the differences between the mean handwriting ratings of the boys and girls were negligible at the later ages.

Bolen (1964) conducted a study to determine the relationship between manuscript writing and spelling achievement in grade 3. Twelve third-grade classes in 10 elementary schools in Richmond, California, provided a control group ($N=160$) which began transition to cursive writing in October. From the same classes he selected an experimental group ($N=152$) which began the transition to cursive writing the following May. Pre- and post-tests were administered using the *California Achievement Test*, Upper Primary Battery, Forms W and X. The *California Short-Form Test of Mental Maturity* was used to obtain an IQ score. Procedures for the study were similar for both groups in spelling instruction. Analyses of the data were made with respect to the influence of handwriting treatment, IQ, and sex on spelling achievement. The results showed: (a) no significant difference between handwriting groups in the ability to spell, (b) no significant difference between the correlation of IQ with spelling gains for the two groups, (c) a 5 percent sex difference factor in favor of males for the mean spelling gain scores in the manuscript group. However, the investigator was not satisfied with this level of significance.

Lewis (1964) and Lewis and Lewis (1965) reported an elaborate analysis of errors in the formation of manuscript letters by first-grade children. In all 15 first-grade classrooms of one school district in a middle class California suburb 354 pupils (180 boys, 174 girls) copied the 52 letter forms of the manuscript alphabet (upper and lower case) in September. In the following April, after the children had undergone six months of formal instruction in manuscript writing, another sample was obtained, utilizing the September procedure. Samples of the children's functional writing were also collected in April. The chronological age and sex of each subject were obtained from cumulative records. The "Draw-A-Man" and "Matching" subtests of the *Metropolitan Readiness Test*, Form R, provided

mental maturity scores and visual perception scores, respectively. Left-handed pupils were identified by their teachers. The quality of the post-instruction samples of copied letters was determined by two judges using the Freeman Manuscript-Handwriting Scale for Grade One. The two ratings were averaged, and a qualitative score was assigned to each sample on a 5-point scale. Pertinent findings included (a) considerable variance in incidence and error among the letter forms of the manuscript alphabet, e.g., errors were most frequent for *q* with *g*, *p*, *y*, and *j* following; errors were least frequent for *l*, with *o*, *L*, *O*, and *H* following, in order of increasing frequency of error; (b) incorrect size, incorrect relationship of parts, and incorrect placement relative to line as the three most common types of errors; (c) most frequent errors in those letter forms in which the curves and vertical lines merge, e.g., *J*, *U*, *j*, *h*, *j*, *m*, *n*, *r*, and *u*; (d) more errors made by boys than girls both before and after instruction; (e) little relationship between error and chronological age within the limited range of 69 to 81 months; (f) a relationship between maturity as indicated by scores on the "Draw-A-Man" subtest and incidence of error before, but not after, instruction; (g) a slight relationship between incidence of error and visual perception as indicated by scores on the "Matching" subtest; (h) the incidence of more errors of all types except retracing among left-handed students before instruction, and the significantly high level of reversals and inversions even after instruction; and (i) greater incidence of error in free writing than in copying letters.

Additional References: Boyle (1963); Byers (1963); Enstrom (1964, 1965); Groff (1964a,b); Lewis and Lewis (1964); Love (1965); Plattor (1966); Schell and Burns (1963).

Spelling

The most extensive computer analysis of phoneme-grapheme relationships to date was reported from Stanford by Hanna and others (1966) and also in a bulletin published for the National Conference on Research in English (1966). Hodges and Rudolf (1965) and Rudolf (1965) described the definitional model composed by the Stanford group for the spelling of American English as follows: "The orthography of American English is determined by a set of rules for unit phoneme-grapheme relationships based, with decreasing productivity, upon three levels of analysis—phonological, morphological, and syntactical." Hodges (1966) described a list of 17,310 words which was selected to identify the graphemes that spell specified phonemes. A "standard" pronunciation system that included 30 consonant phonemes and 22 vowel phonemes was utilized.

Through computer analysis using phonological cues developed by the Stanford group, it was shown by Hodges (1964) and Hodges and Rudolf

(1965) that individual phoneme-grapheme relationships could be predicted with an accuracy of 89.6 percent, but not in terms of whole words. Computer analysis was then utilized to determine "how many and which words in the corpus could be spelled accurately by the use of oral-aural cues alone." Over half the total of some 17,000 words were spelled incorrectly: 8,346, or 49 percent, were spelled correctly. Of the words spelled incorrectly, 6,332, or 37.2 percent, were spelled with one error: 1,941, or 11.4 percent, had two errors; and 390, or 2.3 percent, had three or more errors. Even though the above findings of the Stanford group are significant, the application of computer technology to educational research and the need for field testing the actual application of the findings in classroom instruction are probably equally so.

A basic issue concerned with how the Stanford data were obtained is the use of a "standard" pronunciation system to establish the regularity of phoneme-grapheme relationships. As yet, extensive research is not available on the effect of regional dialects on such relationships. Among the problems the Stanford group faced in establishing their pronunciation system were (a) the decision to use the second edition of the *International Dictionary* instead of *Webster's Third New International Dictionary* as the basis for pronunciation, (b) how to deal with words for which there is more than one accepted pronunciation, (c) the incidence of nonstandard formal English, and (d) differences in dictionary word entries and spellings. The basic question concerning the application of the Stanford study is the extent to which the findings will have utility in spelling instruction. English teachers will get little comfort from 50 percent accuracy in spelling. Nevertheless, it seems logical to take the necessary steps to incorporate the most promising features of the findings into further research on learning to spell in the classroom.

Oswalt (1962) studied the effect of proofreading for spelling errors on the spelling achievement of fifth-grade pupils. Boys in the fifth grade with IQ scores of 110 and below showed improvement in spelling with proofreading instruction. Girls were significantly better than boys in recognizing misspelled words and correctly reproducing words recognized as misspelled. Correlations between intelligence and spelling, intelligence and achievement in recognizing misspelled words, spelling achievement and achievement in correctly reproducing misspelled words, and spelling achievement and achievement in recognizing misspelled words, and spelling achievement and correctly reproducing words recognized as misspelled were all significant at the 1 percent level.

Plessas (1963) studied children's errors in spelling homonyms and found that (a) certain homonyms were hard to spell throughout grades 3 to 6, (b) the majority of errors involved substitution of wrong homonyms, (c) the percentage of error in homonym substitutions varied greatly within the grade and among grades, with no regular pattern of errors found, and (d) errors did not show uniform decrease from the

lower to upper grades (older children showed a higher percent of error in some instances).

Kooi, Schutz, and Baker (1965) conducted a replication of the study by Jensen in 1962 relating to spelling errors with predictions based on serial position effect. The outcome of their study not only supported Jensen's findings, but, through a revised scoring system, emphasized the bow-shaped distribution of errors. The authors pointed out, however, that the shape of the curve is extremely sensitive to the scoring procedure used.

As partially reported earlier in the handwriting section of this review, Anderson (1963) compared the reading, spelling achievement, and quality of handwriting of groups of English, Scottish, and American children. Trends pertinent to spelling, selected from his résumé for the total study, include the following findings: (a) the mean scores of Leeds and West Lothian children 7 years old excelled those of American children of the same age in virtually all comparisons; (b) at ages 11 and 14, Leeds and West Lothian children tended to maintain an advantage on spelling and word meaning, especially spelling; (c) comparisons of Leeds and West Lothian samples using norms at the usual age plus 12 months erased the initial advantage on all areas but spelling; (d) at age 7, the Leeds and West Lothian samples showed greater variability than American samples on the achievement test; (e) at ages 11 and 14, the Jackson sample was more variable than the West Lothian on spelling, while the Leeds sample was more variable than the Jackson sample; (f) at age 7, girls excelled boys in every comparison on all tests, although the differences were not always significant; (g) the mean scores of girls 14 and 11 excelled the mean scores of the boys on the spelling test, with some evidence that the differences in favor of girls increased with age, especially in the Jackson sample; (h) boys were more variable than girls, especially in spelling; and (i) the most common misspellings in Leeds and West Lothian were more often phonetic in nature than those in the Jackson sample, although the differences decreased with age in comparison with the Jackson and West Lothian samples. Personke (1966), a research associate on the Anderson study, described in greater detail the comparison between spelling achievement of Scottish and American children and showed that the Scottish children were clearly superior. Anderson (1963) and Reid (1966) evaluated five methods of spelling tests, word

Reid and Hieronymus (1963) and Reid (1966) evaluated five methods of teaching spelling in the second and third grades: test-study-test, word perception with test, word perception without test, proofreading and correcting, and workbook alone. Three criterion tests were devised, the first two being used as both pretest and post-test and the third employed as post-test only. The first test was composed of words specifically taught under the test-study-test and workbook methods, sampling 60 words for grade 2 and 60 words for grade 3 from the textbook and workbook. The second test was devised from a selection of high social utility words from the *New Iowa Spelling Scale* which were not specifically taught under any of the methods. These words had a correctness-of-response percentage of

less than 35. The third criterion test, called a "sensitivity to error" test, required proofreading ability in recognizing spelling errors in context. The authors found the test-study-test and word perception methods were somewhat superior to the proofreading and correcting method and the workbook method. On the two list-dictation tests, all eight of the significant differences favored the former three methods over the latter two. However, when the "sensitivity to error" test was a criterion, only three differences favored the former; five favored the latter. The authors concluded that, since "methods as different as test-study-test and word perception proved to be so nearly equally effective under conditions of supervised, enlightened teaching in nearly optimum situations," it is suggested "that effectiveness of spelling instruction is not so much a matter of method but rather of how adequately the method is implemented."

Hall (1964) explored the possibility that the letter mark-out method added to the corrected test procedure might produce different results than the corrected test alone. He used 738 students in 28 classrooms in Killeen, Texas, 14 classes being assigned to a control group and 14 to an experimental group. The author concluded that neither approach appeared to be significantly better, but the letter mark-out method may make a slight contribution.

Additional References: Allen and Ager (1965); Ames (1965); Bloomer (1964); Browning (1957); Buros (1961); Byers (1963); Clymer (1963); Davis (1954); Eichholz (1964); Freyberg (1964); Glim (1964, 1965); Groff (1965); Hahn (1964); Hanna and Hanna (1965); Hodges (1965); Ilika (1963); Jarvis (1965); Lamb (1964); Lester (1964); Loban (1963); McCann (1955); O'Reilly (1965); Otto (1965); Personke and Yee (1966); Petty (1965); Plessas and Dison (1965); Plessas and Ladley (1965); Rosemeier (1965); Rudolf (1965); Yee (1966).

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CHAPTER VII

Literature in the Elementary and Secondary Schools

MARGARET EARLY and NORINE ODLAND

Although research related to the teaching of literature has continued to be comparatively light during the period covered by this REVIEW, there has been a noticeable increase in the number of studies attempting to analyze students' responses and to measure the effects of instruction. More studies were found that offered experimental evidence than in previous three-year periods, but these studies were sporadic and inconclusive. The big questions—What does literature do to readers? Can literature be taught?—are hard to answer. To find answers, tentative explorations in identifying and analyzing responses to literature seem more appropriate at this time than more ambitious investigations of teaching methods.

At the present, more basic questions need to be asked again. What are students reading? Where do they get their books? How much time is given to literature instruction? In the meantime, literature continues to be important in framing new curricula, refurbishing old theories, and for investigating curriculum content, even though we do not know if it can be taught, or how.

Responses to Literature

In studies of responses to literature, the mode of analysis is of as much importance as the findings. Monson (1966) investigated children's responses to humor by using four types of questions, of which one was unstructured and three were structured. The questions were based on excerpts from recommended children's books which were reproduced for this study. The children were fifth-grade students whose reading scores were above 3.5 grade level. Typical responses of boys in all groups and boys and girls in low socioeconomic groups were to judge selections humorous when presented with structured questions. Children in the higher intelligence group judged excerpts as humorous more often than did children in middle or lower intelligence groups. The evidence suggested that different methods of questioning result in different responses from children.

Two doctoral studies frequently referred to in the past decade have been given a wider audience in this three-year period through their publication in a series of research monographs. Both of these studies employed the same method of coding students' responses to literature. Squire (1964) studied the responses of tenth-graders to four short stories, recording oral

responses made immediately after reading each of five segments and after completion of the whole story. He devised seven categories for coding the responses: literary judgment, interpretational, narrational, associational, self-involvement, prescriptive judgment, and miscellaneous. This study identified six sources of difficulty experienced by adolescents in reading fiction: failure to grasp meaning, reliance on stock responses, "happiness binding," inflexible criteria for judging literary worth, irrelevant associations, and intolerance of ambiguity.

Wilson (1966) applied Squire's categories to written responses of 54 college freshmen to three novels: *The Catcher in the Rye*, *The Grapes of Wrath*, and *A Farewell to Arms*. Responses written immediately after initial reading were compared with responses written after 150 minutes of class discussions. In this study, Wilson attempted to measure effects of teaching. Interpretational responses increased from a mean of 54.5 percent to 78.4 percent, while literary judgment responses decreased from a mean of 17.0 percent before to 7.0 percent after. Wilson's analysis of individual protocols cast some doubt on the validity of the coding, even though generally the individual analysis supported the statistical coding. This research, like others reviewed here, is more important for its exploration of methodology than for its findings.

Strang and Rogers (1965) reported a doctoral study by Rogers of the responses made to a single short story by 70 eleventh-grade students. The findings were derived from an unstructured interview, oral answers to specific questions, two questionnaires, and the oral rereading of selected passages from the short story. Comparisons were made between two groups of 14 high- and 14 low-level readers. This study was more loosely structured than Squire's and Wilson's and less revealing.

Levinson (1963) identified four aspects of response—comprehension, enjoyment, identification with characters, and knowledge of word meanings—in a study of the effects of film versions on the responses of junior high school students to four short stories. One group viewed the film versions before reading the stories, another group after reading the stories; and a third group read the stories without viewing the films. Film viewing either before or after the stories were read improved responses (measured by a multiple-choice instrument) for students with high as well as low IQ scores, for younger as well as older students, and for good readers as well as poor ones.

An interesting study by Blount (1965) compared students' concepts of an "ideal novel" with expert concepts and then compared students' attitudes toward novels which they read with their views of an "ideal novel." For this study, three classes each of ninth- and tenth-graders read three junior novels and three adult novels. Blount concluded that reading and discussion of the three junior novels brought the students' perceptions of the "ideal novel" closer to perceptions of the experts than reading and discussion of the three adult novels.

A study by Tatar (1964) questioned whether reading novels that present a positive image of scientists produces a positive modification of the reader's ideas about scientists. He studied this question by having experimental groups read four novels about scientists, after which he compared their responses on an attitudes scale with responses made by a panel of judges and by control groups. As this was an unsophisticated experiment, its findings must be judged accordingly: however, its purpose is significant, and the findings should be given further study. For example, the finding that attitudes changed, but not always in a more positive direction, invites speculation as to why.

Rees and Pederson (1965) employed factor analysis to determine what personality type responds to poetry in a particular way. They had 74 psychology students respond to each of 11 poems by marking 15 semantic differential scales which were composed of items such as pleasant-unpleasant, chaotic-ordered, etc. Each subject also responded to a personality inventory, a questionnaire, a tolerance-of-ambiguity scale, and other measures of personality. The factor analysis identified four points of view with respect to poetry. Implications for teaching could be generated from at least three of these factors, since positive evaluations of poetry seemed to be related to (a) familiarity with the poetry evaluated, (b) cooperative attitudes, and (c) "sophistication"—a characteristic of subjects with high scholastic ability, familiarity with poetry, cooperative attitudes, and a high tolerance for ambiguity.

Teaching

An important theory of teaching literature emerged as part of a broader study of concept development which Henry and Brown (1963) conducted simultaneously in eleventh-grade mathematics and English classes. Beginning with the hypothesis that pupils will think better if the strategies common to the logic of English and mathematics are emphasized, Henry and Brown identified these common strategies and set forth to teach them. For both mathematics and English, they devised materials to teach students how to create a structure of relations among ideas by applying strategies represented by "and," "or," and negation; and by being aware of using abstraction, generalization, and interpretation. Pre- and post-tests, given to four groups of students, required them to write 150-word essays comparing two poems. These essays were analyzed to identify the strategies employed, which were then tabulated and scored. Statistical analysis supported the hypotheses. The authors appropriately described this study as "only a cautious, small-scale, experimental probing," but it should be recognized as a significant starting point for the type of theorizing and experimentation needed in research in literature.

Test Construction

Forehand (1966) discussed the need for translating objectives such as "understanding, appreciation, enrichment" into reliable observations of students' behavior. Recognizing the restrictions imposed by objective tests, he and his colleagues undertook the construction and validation of instruments to measure understanding, interpretation, evaluation, and taste. Three of the tests were based on the reading of a single short story. A test of 30 multiple-choice items was composed to measure understanding. Interpretation was measured by free responses coded into 10 categories. The third test, which measured attitude, applied semantic differential scales to concepts such as "American drama." The fourth test required selection of a preferred statement related to the short story. Forehand's discussion, as well as the effort described, represents a major contribution, since research in literature has been frustrated by the lack of adequate measuring instruments.

Current Practices

Applebee (1966) described a national study of high school English programs considered to be superior and reported that 52.2 percent of classroom teaching (based on 32,580 minutes of observation) emphasized literature. In grade 10, the proportion of time was 46 percent; in grade 12, 61.5 percent; and in terminal classes, 40.8 percent.

For an evaluation of elementary school literature programs, Irwin (1963) developed a checklist with the help of language arts and library personnel in 58 schools, based on its application in these schools. The checklist consisted of two parts: one to be used for an entire school system, the other for individual classes.

Preferences in Fiction and Poetry

Peltola (1965) studied the responses of 3,187 children in grades 4 and 6 who were asked to name favorite characters. The characters named represented 963 different trade books or series. When these titles were studied, it was discovered that fourth-grade students named significantly more "recommended" books than did sixth-grade students and that realistic stories were chosen more often than make-believe stories. Interestingly, children who chose "not recommended" series books tended to have higher reading achievement than children who named characters from "recommended" books.

In another study, Peltola (1963) presented 192 first-grade children with four pairs of books and asked them to select from each pair one that they would like to read. He used 16 books designated as prize books by the American Institute of Graphic Arts (AIGA) and 16 books published in the same years, listed in Best Books for Children, but not AIGA prize books. The "Best Books" were chosen a significantly greater number of times than were the AIGA prize books. Although results might have been different had another question been posed, the implications are that six-year-olds respond to something other than formats valued by adults.

Simpson and Soares (1965) asked 4,250 junior high school students to rate 862 short stories on a scale between "liked very much" and "disliked very much." The investigators analyzed the 77 least- and best-liked stories and presented profiles for the two types.

According to Berninghausen and Faunce (1964), delinquent boys prefer adult books more than do nondelinquents, but they do not choose more sensational books. However, the authors of this study expressed doubts about the reliability of the checklist as a method for determining reading preferences.

Children in the primary grades expressed their preferences for poetry in a study by Nelson (1966) that compared poems from a 1928 textbook with those from contemporary sources. Poetry chosen most often included elements of action, narration, near-nonsense, child experience, and repetition. The investigator concluded there was great variability in children's choices because no poem received more than half the children's votes and every poem was mentioned at least once. One might question whether variability is truly represented when half the respondents agree on a particular poem.

A similar study by Pittman (1966) was limited to a third-grade class, which rated 50 poems on a four-point scale. From the favorable responses (68.8 percent) it was concluded that children enjoy poetry presented orally, especially poems about animals and child experience, having humor and strong rhythms.

These half dozen scattered studies of preferences are representative of the simple and inconclusive kinds of research that have characterized this area. Lacking coverage and synthesis, these studies are worth little except passing interest.

Reading Habits and Libraries

Applebee (1966) and Squire (1965) reported that high school students made more use of public libraries than of school libraries and other sources. In this study of 16,089 subjects, they found that students read an average of nine books a month. Using a list compiled by Whitman (1961) of the titles which gifted students found most memorable, these

investigators checked the school libraries for the availability of highly rated titles. The one book mentioned most frequently in Whitman's study, *Catcher in the Rye*, was found in only 50 percent of the libraries.

Children in grades 4 to 6, according to Powell (1966), used classroom libraries for recreational reading more than public libraries. If the study had been done over a longer period than eight weeks, the results might not have contradicted the high school study reported above.

Summer use of school libraries was studied by Erdmann (1966), who recorded the number of visits made by second-graders to the libraries during June and July and compared spring and fall reading achievement scores. Although there were no significant findings, the study warrants replication at different grade levels with more careful controls and fuller investigation.

The effects of classroom collections of paperbound books on reading habits were investigated in a project involving 50 public schools (10 elementary and 40 secondary) in New Jersey. The results reported by Fink and Bogart (1965) were based on observations and questionnaires. Students responded enthusiastically to the yearlong project, 62 percent reporting that they read more books than before. Queried about the effect of the project on their teaching, the majority of teachers said that their methods had changed considerably (18.8 percent) or moderately (36.5 percent).

Farley (1964) investigated book censorship in high school libraries in a New York county. He interviewed 54 head librarians and found voluntary censorship more prevalent than involuntary censorship. Books more often censored were those treating sex too explicitly, those presenting extreme or one-sided treatments of communism or race, and those considered too sectarian for public schools.

Content Analysis

A different and important kind of research in children's literature is represented by studies by Burris (1966) and Homze (1966). Homze asked "What is in a child's book?" and gave special attention to differences between realistic fiction published from 1920 to 1940 and from 1945 to 1960. In contemporary books, for example, adult characters appear less frequently and settings are more often urban. Burris evaluated the accuracy of 54 children's fiction books with Japanese settings, published between 1953 and 1964, in portraying people and customs.

Curriculum Development

The most important movement in teaching literature in this period has been the development of curricula and instructional approaches in English

Curriculum Centers supported by the U.S. Office of Education. Full reports of centers emphasizing literature have been made recently by Pooley and others (1965), Smiley (1965), and Steinberg and others (1966). A summary progress report on all centers has been prepared by the NCTE Commission on the English Curriculum (1966). Few of the centers have provided for research studies to test hypotheses on which revisions have been based or to try out new materials and methods. But the centers have already provided almost overwhelming resources for future research. Certainly, the next phase of curriculum development demands attention to research methods that will help to verify assumptions that are now being demonstrated only.

Conclusion

Studying the effects of literature poses problems for research methodology, which is still too simple for such a complex process as appreciation. Therefore, the first need is to develop more appropriate research techniques. Also needed are studies that examine scientifically the mass of literature for children and youth. With increased knowledge of the content of such literature and more effective means of studying the process of appreciation, there should emerge more fruitful studies of the effects of reading literature and of teaching.

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CHAPTER VIII

Foreign Language Instruction

EMMA BIRKMAIER and DALE LANGE

To keep abreast of current information on foreign language teaching is frustrating. Books and journals on methodology, applied linguistics, and testing can be monitored easily, but there are new materials which reach only a limited audience. Beginning in 1967, the Modern Language Association (MLA) and the Center for Applied Linguistics will be clearing-houses for the national Educational Research Information Center (ERIC) and will collect, review, and process current foreign language documents. The MLA center will focus on significant information on instruction in French, German, Italian, Russian, Spanish, and the classical languages from preschool to the graduate level; the Center for Applied Linguistics, on the uncommonly taught languages, linguistics, and the teaching of English as a foreign language.

Carroll (1963b, 1966) updated his evaluation of research in foreign language teaching by reporting on 103 studies. Nostrand, Foster, and Christensen (1965) developed an annotated bibliography of research on language teaching which included international sources as well as an extensive survey of published and unpublished documents from 1945 to 1964. The annotations ranged from fair to excellent with sketchy coverage in parts. The items dealt with methods, materials and equipment, the psychology of language, linguistics, cultural and intercultural studies, languages in the curriculum, and teacher training. Author and subject indexes contributed immensely to the value of the bibliography. The paucity of research on culture done by the profession was a cause for concern.

Learning and Instruction

Psychology

Many language teachers have taken a precise stand on accepting the audiolingual approach. Rivers (1964) examined its basic assumptions carefully and found support for most of them in behaviorist psychology, but she pointed out that a gap exists between manipulation and communication in the language. To help close the gap, she drew heavily on Gestalt psychology. Relationships are better revealed by analysis than analogy alone and aid in transfer. Many interpret this as going back to the grammar-

translation approach, but this is not so. By combining the best features of the two theories, the profession could increase its potential in more efficient language teaching. Belyayev (1964) insisted that cognitive theory had a role to play but that much manipulative drill was necessary.

Additional Reference: Carroll (1965).

Broad Comparisons

The most ambitious comparison of the audiolingual and the grammar-translation approaches under classroom conditions was conducted by Scherer and Wertheimer (1964). The main hypothesis tested was that training in listening-speaking transferred to the reading-writing skills. In the first year, when the two groups were taught separately, the students in the audiolingual classes tested better in listening-speaking skills; the traditionally trained groups, better in reading-writing skills. During the second year, when the two groups were given instruction in common, the differences disappeared except in the active skills, when the audiolingual groups were better in speaking and the traditional groups were better in writing. Specific strategies of instruction did have an effect on retention. Audiolingually trained students showed more desirable attitudes and better direct associations. A number of ingenious psycholinguistic measures were introduced to determine the internalization of language patterns.

This study is of considerable value to the researcher for several reasons. Objectives were precisely stated. The achievement tests used were designed to evaluate listening, speaking, reading, writing, and English to German and German to English translation in order to avoid bias. Special materials were developed for the audiolingual classes to make certain that the students were presented with the same structures and vocabulary as the traditional groups, an important factor usually disregarded in language research. Conclusions regarding treatment groups were based on an undiscriminating use of correlations. If factor analysis had been used, the conclusions would have been more valid. One wonders what the results would have been if the audiolingual and traditional groups had been kept separate during the second year and a follow-up study made six months later. Such follow-up is needed to validate various approaches to language learning.

Since broad comparative studies do not control many of the variables involved, it may be that the smaller, detailed study of specific learning processes might yield more precise information regarding effective instructional procedures for the various skills which make up foreign language learning.

Listening and Speaking

An important aspect of listening in foreign language learning is the discrimination of phonemes. Lane (1964a,b), assuming that the process

of discrimination could be controlled by reinforcement, examined the nature of the discrimination process in foreign language learning. In English speakers learning to discriminate Spanish sounds, he found discrimination transfer when sound discriminations in the native language were applied to foreign language sounds. Such a process would tend to simplify the teaching of phoneme discrimination in foreign language learning because of previously learned perceptions.

Once students can discriminate foreign language sounds, they start to produce them. Buiten and Lane (1965) described a Speech Auto-Instructional Device (SAID) which would provide immediate feedback on the learner's prosodic accuracy by comparing his attempts with a given model. The machine would also adapt the sequence of learning to the student's proficiency at each step.

The discrimination process in the presence of visual symbols was examined by Crothers, Suppes, and Weir (1964), who studied the length of time that an English learner of Russian took to recognize aural stimuli in graphic symbols such as the Cyrillic alphabet. Subjects took more time to react to the Cyrillic symbols than to the graphic symbols of their own native language. This was considered to be a sensitive indicator of the stage of language learning.

The relationship of speaking to listening in foreign language learning was examined with elementary school pupils by Keislar and Mace (1965). Their study contrasted groups for which training in speaking preceded training in listening, listening training preceded training in speaking, and training in listening and speaking was concurrent. Results indicated that the speaking-first group was superior to the listening-first group in listening comprehension. Because of a suspected effect of recency in the speaking-first group, the study was replicated by Keislar, Stern, and Mace (1966). Results of the second study showed superiority of the speaking-first group after one and three months. Sequencing, and not recency, was responsible for these results.

Sawyer and others (1963) investigated the problem of teaching pronunciation with phonetic symbols and found some advantage in the use of a phonetic text during a 30-hour programmed learning course in Japanese. They also found that the advantage might be lost if the phonetic symbols were confusing to the learner.

Few studies have appeared that deal with the long and involved process of learning to speak a foreign language.

Visual-Auditory Relationships

Experimentation has given information regarding the sequencing of learning tasks. Laboratory studies by Asher (1964) and Pimsleur and others (1964) indicated that effectiveness of the audiovisual (A-V) or visual-audio (V-A) order depended on the relationship between sounds as

visually represented and the learner's already established spelling habits, language learning ability, and his learning stage. High-ability students performed better with the V-A order at any stage of learning, while the low-ability students found the A-V sequence easier in the early stages. Asher also found a large positive transfer from the visual to the audio for materials in Spanish, Japanese, Turkish, and Persian. Positive transfer from audio to visual was found for Spanish, Japanese, and Russian. The positive transfer for the V-A sequence was usually much higher than that for the A-V sequence and was accounted for by the congruency of fit between the spoken and written language. There is probably little difference in the results produced by use of the V-A or A-V sequence in foreign language teaching. However, it was recommended that the A-V sequence be used to avoid interference in pronunciation.

Several classroom studies have attempted to evaluate the A-V sequence in the form of the prereading period. Muller (1965) found that the introduction of the written symbol during the early stages of learning had a negative effect on English-speaking students' ability to pronounce Portuguese. This same negative effect could not be found in the students' ability to produce intonation patterns under the same conditions. In an attempt to evaluate a 12-week prereading period in the teaching of French, Lange (1966) compared prereading and ordered-multiple groups on achievement in four skills after 12 weeks and after a year of instruction. Results indicated significant achievement in speaking only for the prereading groups after 12 weeks of instruction—a difference which disappeared at the end of the year. In three other skills, there were no differences between groups after 12 weeks and after a year of instruction. In a programmed approach to the learning of Russian script, Saltzman (1963) found that an integrated audiovisual program during which visual and auditory stimuli were presented together appeared to be more efficient than either the V-A or A-V sequence.

The classroom studies support the conclusions of the laboratory research. However, much more has to be known about the introduction of the written word at different ability levels and age groups using different languages. Student attitudes toward A-V or V-A sequencing in foreign language learning are also important motivating factors.

Additional Reference: Cook (1965).

Reading and Writing

Few studies were available on instruction in reading and writing. The Northeast Conference on the Teaching of Foreign Languages (1963) has given the best review of instructional procedures. Russell and Fea (1963) provided information about reading in general which may be of use to foreign language teachers.

Vocabulary

Research has not been done in recent years to determine the effectiveness of learning vocabulary in context or to establish which instructional procedures and vocabulary organization would be the most appropriate. Carroll and Burke's (1965) study with vocabulary lists learned through anticipation indicated that there is a limit to what can be achieved within a given period of time and that vocabulary learning should be spaced over a longer time.

Grammar

Few research studies reported on the teaching and learning of grammar in foreign languages. Saporta, Blumenthal, and Reiff (1963) attempted to compare three grammatical models (finite state, phrase structure, and transformational) as bases for the learning of syntax. The studies reported did not attempt to answer pedagogical questions but were an attempt at isolating an underlying grammatical model. This information could be useful in demonstrating how such a model might facilitate second language learning in specific situations. Using a simple artificial language, the three experiments indicated no difference in subjects' ability to distinguish grammatical from nongrammatical sequences. In a fourth study, however, where students in three groups learned the artificial language under conditions where materials were organized in finite, phrase, and random structures, the results indicated the superiority of students using phrase structure. These studies were only initial examples of experimentation with syntactical models in second language acquisition.

Indirectly allied to the teaching of grammar, studies by Stockwell and Bowen (1965) and Stockwell, Bowen, and Martin (1965) contrasted English and Spanish sound and grammatical structures. Delattre (1963, 1964a,b) compared the prosodic, vocalic, and consonantal features of English, German, Spanish, and French. Another study by Delattre (1965) reviewed vocalic nasality in English and French.

Foreign Languages in the Elementary School (FLES)

Many FLES programs have failed because of lack of well-defined objectives, poor teacher preparation, uncertainty of methods, lack of materials, failure to secure continuity, lack of administrative understanding of language learning, and false expectations. Cohen (1964) indicated that wherever FLES is successful, as in the teaching of English to French children at the Ecole Active Bilingue, there is careful planning and an imaginative, systematically executed program using skillful teachers over a period of years.

An experimental study of FLES investigated the role of certain variables in language teaching to children. Schramm and others (1964) described a Spanish program taught to fifth- and sixth-grade pupils. The fifth grade used TV lessons broadcast during the day and in the evening. Pupils performed best in the group where supervision and follow-up were carried on by teachers with fair preparation and where parents viewed the program with the children during the evening. In the sixth grade, pupils with fifth-grade Spanish experience demonstrated that a start in reading and writing in the first semester was more effective in strengthening the audiolingual skill than waiting until the second semester. Classes in which the teacher supervised the automated instruction showed better results than classes which were conventionally teacher-directed.

The unique contribution that FLES can make to the language development of children has never been sufficiently emphasized. The case for FLES must rest on evidence that it is (developmentally) sound educational policy. FLES experience has found children particularly amenable to meaningful discrimination of sounds, role playing, and simple linguistic behavior in social situations. Mussen, Conger, and Kagan (1963) have shown that the foundation of social attitudes is laid in the primary years. The monoglot education of the elementary school teacher and the monoglot experiences of children in the first decade create barriers hard to remove at later age levels. In other words, foreign language activities form a natural and integral part of a child's education throughout his formal schooling. The question is not the optimum age for beginning the second language but what foreign languages can contribute at every stage of the educational process.

Systematic field studies on linguistic and cultural data are needed which provide information for the development of FLES materials. In 1963 an exchange between Britain and France was begun to collect and analyze aspects of children's language in order to incorporate the results of such inquiries into French and English foreign language courses. Such research introduces an element of validity into FLES which in the past hardly existed.

Stern (1966) pointed out also that however good the materials, the outcomes of FLES depend upon the teachers. If languages are to be an integral part of elementary education, they must be incorporated into the teacher training program. The development of such teachers will be slow, but this should not hamper the FLES movement since enough research has shown how much can be done with carefully guided and enthusiastic teachers and the use of technological media.

Programed Instruction

Self-instructional materials in foreign languages are still in the exploratory stages. The Center for Applied Linguistics sends out information

sheets on the various programs, of which there are currently some 27 in seven languages.

Valdman (1966) indicated that the programmer must demonstrate that programed materials mean increased efficiency of instruction and reduction of staff needs, and so are worth the initial cost. He also produced evidence that students using programed materials and working with an instructor in small-group sessions had a higher retention rate and better oral proficiency than students in conventional classes, although their reading ability was less. Carroll (1963a), in writing a self-instructional course in Mandarin Chinese, found that most aspects of the spoken and written language can be effectively taught with a specifically constructed audiovisual device without the aid of an instructor. Final achievement was high, and rate of progress correlated highly with aptitude.

Bryan (1965) tested a self-instructional linear programed course in spoken Spanish with 13 elementary school teachers who proceeded at their own rate and held periodic meetings with a Spanish instructor to evaluate their progress. The students were frustrated because the program focused on the learning of structure without meaning, which resulted in a meaningful feedback. A reduction of frames in the program would have cut the time necessary to complete the course and the repetitiveness disliked by adults. McDonald and Bell (1963) tested the same program and one in Russian on secondary school students. Highly motivated students known to have language aptitude and experience instructed themselves effectively. The students who studied Russian found the program less satisfactory and attributed their frustration to the imperfections of the course. However, following this, students had no difficulty fitting into a second-year course and were found to have better pronunciation habits than those taught in the conventional classes.

Spolsky (1965) described an automated branching program device that permitted teaching materials to be selected according to type of response. The program is significant because it has a built-in selective unit which has four separate alternatives—one for correct responses, and separate sequences for each of three possible incorrect responses.

The inconclusiveness of studies of programed learning points to the fact that self-instructional materials must be subjected to many field trials. These materials require new tests, and research needs to be well designed, as in the Scherer-Wertheimer experiment. However, short self-instructional materials do make it possible to study the effect of single variables on specific language skills.

Technological Media

The number of language laboratories in the secondary schools has grown from a few dozen in 1959 to well over 10,000; in colleges, from 250 to over 1,000. Hutchinson (1966) stated that effective use of a language

laboratory involved (a) the teacher, (b) integration of the teaching materials used in class and laboratory, (c) the testing program, (d) practice sessions, and (e) the equipment.

Research validates the usefulness of the laboratory in attaining the objectives for which it was intended. Studies of immediate application to language laboratory equipment were made by Locke (1965) and his associates on the ability of students to distinguish phonemic contrasts in German and French under different conditions of frequency response of the equipment. As to discrimination, a system frequency response of less than 7,300, and especially below 5,000, cycles per second prevented a substantial number of students who had never studied a foreign language from perceiving phonemic contrasts. It was found that far better sound quality is needed than that which the average laboratory has.

Two studies indicated that certain combinations of laboratory practice, both in kind and in frequency, were more productive than others. Lorge (1964) studied the relative effectiveness of four different kinds of laboratory practice. Students with one laboratory session a week made no more gains than those in the control groups (no equipment); students with daily practice made dramatic gains. In listening and speaking skills, the daily record-playback group showed more striking gains than the daily audioactive group; and in overall gains the daily laboratory groups were superior to the no-equipment groups. Young and Choquette (1965) studied the effectiveness of four basic systems of laboratory equipment. For improvement of pronunciation, audioactive headphone-microphone was superior to unactivated headphone. Differences among the four systems were not significant. Although each type was effective, none was as nearly indispensable as the classroom instructor in reinforcing the student's self-correction and practice. These studies seem to support the idea that the type of equipment is not as important as its quality, the techniques used, or the amount of time the student spends in the laboratory.

There is no penetrating research on the use of films in helping students understand the culture and language of foreign countries. Sound tracks heard on films are useful in helping the language learner. But here again the kind of equipment plays a major role in sound discrimination. Forsdale and Dykstra (1963) experimented with a technique using 8mm sound film in cartridge-loading projectors operated by the student. The learner engaged in conversation with characters appearing on the screen before him. While tapes provide practice with language patterns, they cannot simulate actual conversations with native speakers in a variety of appropriate cultural settings nearly as well as films.

The next five years will see revolutionary changes. Laboratories with visual components to facilitate programmed instruction and teach the cultural aspects of language learning will be a significant part of learning resource centers.

Additional Reference: Hayes (1963).

Evaluation

Student Characteristics

Pimsleur (1966), using his Language Aptitude Battery and student grade point average, obtained a correlation of 0.72 with language grades, a significant increase over other combinations of measures in accuracy of prediction. In most language classes, 10 to 20 percent of the students were found to be underachievers according to Pimsleur, Sundland, and McIntyre (1964). Lack of auditory acuity was considered to be one of the main factors in differentiating normal achievers from underachievers.

The assumption that there is a positive correlation between musical ability and the ability to learn a language was studied by Blickenstaff (1963), who concluded that the relationship was only marginally significant. Leutenegger and Mueller (1964), using the Seashore Measures of Musical Talent, found that students who dropped out of an intensive oral French course had low Seashore scores, thus reflecting a regression in audio learning. Audio training was found to be a necessary factor in language learning.

Lambert (1965) found attitudes toward the French people and their language to be important factors in learning French. Franco-Americans in Montreal and Louisiana had negative attitudes; only in Maine did Franco-Americans respect their French heritage, and their language achievement was correspondingly higher. Most of the American students had no real enthusiasm for learning French. Lambert stated that language learning played a weak role in the goals of most American students. Leutenegger and Mueller (1964) found that college student dropouts and late finishers in an intensive oral approach tended to be those with low rigidity scores on the Pensacola Z-Scale personality test. Personal rigidity scores seem to have a relation to audiolingual language training and merit further investigation.

Achievement Testing

The *MLA Foreign Language Proficiency Tests for Teachers and Advanced Students* are currently being used by Carroll (1966) in a nationwide survey of the proficiency levels attained by seniors majoring in foreign languages in American colleges and universities. In a pilot study the average scores made by seniors on the four skills tests were generally in the range of the average scores made by teachers tested in the NDEA institutes. Bryan (1966), in describing the new *MLA Cooperative Foreign Language Tests*, brought out the fact that students in the traditional programs did slightly better in reading and writing, but not significantly so. Students with two years of high school instruction did as well on the tests as those with one year of college instruction, and students with four years of high school instruction did better than students with two years of college instruc-

tion. Universities face a challenge in the audiolingually oriented secondary school language student.

Lado (1964) used memory span to measure mastery of a foreign language. The language student remembered progressively longer sequences of materials as his ability in structural and lexical meanings increased. Spencer and Seguin (1964) tested two groups with a listening test in German, one group using earphones and the other a loudspeaker. Performance on the test for the earphone group was significantly superior. Seelye (1966) described the intricacies of developing tests on deep culture. Tests were given to Americans in an attempt to determine the level of cross-cultural awareness attained after residence in Guatemala. In sampling the Guatemalans, the variables controlled were age, social class, sex, and residence. By controlling these it was possible to select those items which were answered alike by the natives of the target culture, thus minimizing test biases. In developing the test it was necessary to pretest the items with the target culture group and the American group. This is one of the more ambitious attempts to explore the testing of one of the primary goals for foreign language learning.

Additional Reference: Birkmaier (1966).

Bilingualism

Since language teachers work with and produce bilingual students, they should be interested in what bilingualism does to students intellectually, emotionally, and attitudinally. Ethnic bilingualism offers a reserve of potential language proficiency in our country. Fishman (1966) studied degrees and kinds of bilingualism, as well as its context and processes (performances), its ways of functioning, and the consequences and concomitants of various methods of language learning. Children learning an ethnic mother tongue, an extremely important segment in the foreign language classroom and in immigration centers, benefited most from pride in their own group (ethnic group) membership rather than from a desire to take on characteristics of another group, according to Brault (1964). He found that method gave way to motivation, the learner's background, and the degree of success he experienced in learning the language.

Additional Reference: Roeming (1965).

Teacher Training

Thousands of language teachers at NDEA institutes revealed inadequacies in language teaching. Axelrod (1966), after visiting institutes, recommended that the integrated program as well as the curricular pattern be incorporated into teacher education. Although literature study was important, concentration in this area was out of proportion in the colleges.

as other segments of the teacher training program were equally, if not more, important. Some of the suggestions to aid in curricular change were NDEA-supported institutes for college personnel and the compilation of a case book on successful programs.

Walsh (1964) found that only two-thirds or less of the teacher's time was devoted to teaching the language; valuable human resources were wasted. Dellaccio (1965) found a possible solution to the problem in inter-school cooperation and the utilization of the teacher in junior and senior high school. Paquette (1964, 1965), in writing up the surveys made by the MLA on current practices in liberal arts colleges and schools of education, found that little more than two-thirds of the liberal arts foreign language departments offered equal semester hours for majors who intend to teach and those who do not. Eighty-three percent of the departments participated in some type of practice teaching program, but the schools of education offered more language laboratory practice and supervision by a cooperating teacher in a public school. There seemed to be considerable room for improvement in the coordination and supervision of student teaching programs. Only 20 percent of the programs included the use of any kind of proficiency examination. Paquette concluded that the profession still has a long way to go to provide adequate information about the competence of its graduates.

Politzer (1966) applied direct testing of a specific teaching skill in a micro-teaching procedure. The trainee was given instruction in a specific teaching skill, after which he taught a short 5- to 10-minute lesson to a small group of students. The lesson was criticized by a supervisor, and if the performance was unsatisfactory the lesson was immediately retaught to another group of students. Video-taping gave immediate feedback and enabled the trainee to see and correct his weaknesses. The Peace Corps program described by Shea and others (1963) merits careful consideration in devising more effective schedules and curricula in teacher training.

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CHAPTER IX

Music Education

IAN H. HENDERSON *

An unprecedented enthusiasm for research activity, experimentation, and innovation was evident in the field of American music education during the period from 1963 to 1966. The Yale Seminar, called by the U.S. Office of Education in 1963, was described in an official report edited by Pelisca (1964). Although not all of the research activity which followed was related to the Yale Seminar (some of it had started well before 1963), the coincidence of that historic meeting with the beginning of the time span subject to report in this chapter has been noted and is brought to the attention of the reader.

Research Sources

For a number of years, the best single reference for researchers in music education has been the *Journal of Research in Music Education*, which contains research news and comments, abstracts of research studies, bibliographies, and reviews of published material. Three new journals have become available during the period of this review: the *Bulletin of the Council for Research in Music Education*, the *Colorado Journal of Research in Music Education*, and the *Missouri Journal of Research in Music Education*.

Reviews

Choate (1965) published a paper presented at the New England Conference on Educational Research, held at Rhode Island College, Providence, November 27-28, 1964. Many of Choate's comments about recent music research were pertinent to the purposes of this present chapter. Choate reviewed sources of completed research findings and sources for financial assistance, categorized types of research, described areas needing investigation, and listed more than 70 references to substantiate his analysis of the state of research activity in the profession.

Arberg (1964) described programs in music education supported at that time by the U.S. Office of Education. He categorized research and

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related activity according to six major subprograms: (a) basic and applied research, (b) demonstration, (c) curricular improvement, (d) small contract, (e) research and development centers, and (f) curriculum improvement activities. Gordon listed 975 doctoral dissertation titles covering the period from 1957 to 1963 (Gordon, 1964) and 175 titles for the period from 1963 to 1964 (Gordon, 1965).

A monumental synthesis of music education research, covering the period from 1930 to 1962, was completed by Schneider and Cady (1965) under a grant from the Cooperative Research Program of the U.S. Office of Education. This publication is a new source for definitive comment on music education research and one of the most significant projects of the period under discussion. Schneider and Cady listed and abstracted 273 research studies. These were related to one or more aspects of music education and were submitted to the Educational Research Information Center (ERIC) network of microfilmed research abstracts. The published report contained a carefully prepared bibliography of several hundred additional articles, books, monographs, and research reports which, although reviewed, were not abstracted for use in the research synthesis.

Additional Reference: Cady (1964).

Other Sources

The Contemporary Music Project for Creativity in Music Education, administered by the Music Educators National Conference under grants from the Ford Foundation, published *Comprehensive Musicianship* (1965), which summarized findings of a seminar held at Northwestern University and included implications for research. *Dissertation Abstracts* continued to serve as a ready resource for information on unpublished doctoral theses.

Research

A significant contribution to the profession was Petzold's (1966) five-year study, an extension of a pilot experiment, which used sound experimental techniques. This longitudinal study provided evidence of practical implication for teaching procedures at the elementary school level. Petzold's findings on auditory perception (a) advocated greater emphasis on "readiness" programs in the first grade, (b) emphasized that imitation of aurally presented musical ideas does not always measure children's understanding of these ideas, (c) noted that the child's ability to respond accurately to aurally presented patterns of certain types does not change significantly after the second grade, and (d) suggested that 85 percent of children have

learned by second grade to control the singing voice and that approximately 8 percent of "problem singers" in first grade remain so throughout the entire elementary school experience.

Spohn (1965) tested teaching procedures and the effect of knowledge of results by employing variations of rhythmic, melodic, and intervallic material in transcribing music. Laboratory methods employed were reported superior to traditional classroom teaching.

Thostenson (1966) studied ear training problems as they relate to achievement in sightsinging and dictation. He found that achievement in ear training and dictation is related to and influenced by the applied music background of the student and that achievement differences are susceptible to change by variation of the instructional technique. Colwell and Rundell (1965), testing differences in auditory-visual discrimination between junior high school classes, employed ukulele and piano harmonies and found no significant differences between groups.

The Juilliard School of Music is presently engaged in a three-year project for the development of a new repertory (K-6). The objectives and status of the project were reported by Housewright (1964). Reimer (1965a) summarized the results of a two-year study of curricula for junior and senior high schools. *Experiments in Musical Creativity* (1966) reported on the repertory used and the results of three pilot projects at Baltimore, San Diego, and Farmingdale, New York.

Programed instruction and learning theory are not yet, unfortunately, matters of real concern to music educators. However, Carlsen (1965) and Leonhard (1965) did studies which were concerned with these approaches to instruction.

Additional References: Ausubel (1964); Carlsen (1962, 1964); Drake (1965); Gutsch (1965); Ihrke (1963); LaBach (1965); Maltzman (1964).

Future Research

Governmental and institutional agencies have shown increasing willingness to support research projects in music education. Choate (1965) and Reimer (1965b) suggested topics and techniques for consideration. The *Washington Report No. 13* (1966) outlined other areas for future investigation. Teaching methods employed in other countries and, as yet, relatively new to American music education offer possibilities for comparative study—the Suzuki violin method, the Carl Orff Schulwerk, and the Kodaly techniques. Teaching media, programed instruction, perception of form and structure, and creativity are topics now under investigation. These and other new areas should be reported in the REVIEW's next summary of research in music education.

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CHAPTER X

Art Education

KENNETH R. BEITTEL

The past three years have been marked by government funding of research and development projects, increased centralization and professionalization of art education, and a climate generally supportive of scholarly inquiry. There has been renewed emphasis on aesthetics and criticism as well as art production, and a concern for "perceptual training" and study of social and cultural forces shaping art behavior. The use of the methodologies of philosophy and psychology has given an interdisciplinary flavor to emerging theory and research.

Measurement

Bernheim (1964) isolated 12 differential criteria for judging art products, using evaluatively neutral language (e.g., border of shapes: ragged to smooth). She found that they clustered into spontaneous, formal, and divergent domains; only the divergent domain was independent of a global aesthetic judgment. An extensive study by Rouse (1964) produced 20 stable descriptive criteria from 313 criteria selected from literature on aesthetic judgment. Of six factors derived, only one (internal static/dynamic action) discriminated between a small sample of "best" and "poor" products. Getzels (1965) used three criteria to assess the products of art school students: overall aesthetic, originality, and craftsmanship. He found discriminating relationships with two criterion variables. Originality correlated positively with "discovered" and negatively with "presented" problem-solving abilities; whereas the opposite occurred for craftsmanship, and aesthetic quality related to neither.

Thomas (1965) proposed four criteria for more adequate measurement in the visual arts: coverage of a range of factors; distinctions between appreciation, criticism, and production; norms adaptable to varying art philosophies; and more adequate treatment of creativity. He developed six categories for measuring devices: two consumer aspects (art preference, art analysis), and four producer aspects, with achievement and aptitude measures for each. Child (1964b) demonstrated that there was no relationship between measures of aesthetic sensitivity using peer consensus or stimuli other than art works and measures using art works and expert consensus as a standard. He raised the question of whether consistent variation below as well as above chance should occur on tests of aesthetic sensitivity.

Art Behavior, Creativity, and Personality

Eisner (1965) presented a typology of creative behavior in art with four types of creativity (boundary pushing, inventing, boundary breaking, and aesthetic organizing) and two loci (content and form). When these were used to evaluate two- and three-dimensional products of sixth-graders, he found that creativity types were related when they had a common locus and that creativity types and IQ scores were unrelated: boundary-breaking behavior was rare.

Mackler and Shontz (1965) used four Torrance creativity tests to evaluate classification (life style) and treatment (visual and kinesthetic, stimulating and destimulating) conditions for 100 coed undergraduates. Art and dance groups scored higher than handicapped and control groups, and there was a tendency for kinesthetic treatments to be superior to visual. Both so-called stimulating and destimulating treatments were stimulating to subjects.

Using agreement with expert consensus as an index of aesthetic judgment, Child (1965) described personality correlates of a group of male college students. He found significant relationships with tolerance of complexity, scanning (perceptual functioning), independence of judgment, regression in the service of the ego, intuition rather than sensation, and perception rather than judgment. In other instances, predicted relationships failed to emerge (e.g., masculinity vs. femininity, originality).

Getzels (1965) and Getzels and Csikszentmihalyi (1964) studied creative thinking in art school students. They found that values and personality characteristics differentiated art students from other students (e.g., commitment to a dominant value, high radicalism and self-sufficiency) as well as differentiating between various subgroups of art students (e.g., fine arts students were socially aloof, low in superego strength, high in imagination). Art students taking part in shows or exhibits were more likely to be classified as "high discoverers" in Getzels' problem-solving experiment. This experiment presented a coherent rationale and methods for studying creative behavior in the studio context.

Additional References: Knapp (1964); Morris and Sciadini (1966); Rouse (1965).

Teaching and Learning: Production

Clements (1965) described art teachers' question asking at the first and seventh grades and at college levels. Teachers typically asked many questions, gave students very little time to answer, and were consistent in this behavior. Similarities in question asking existed at each level on six of eight question types. Jones (1965) classified student and teacher verbal interactions and found that when students simulated the teacher role, some patterns of verbal behavior were reversed. Consistent sequences of state-

ments emerged (e.g., a long teacher statement evoked a student task statement; a new teacher statement evoked a long student response), and these were related to learning differences in the students' art.

Burkhart (1962) described the relationship of students' spontaneous and deliberate ways of learning to personality and creativity. Beittel and Burkhardt (1963) revised this typology into two self-consistent, opposed art strategies: spontaneous (organic, holistic, interactive) and divergent (control, detail, part-chaining). Beittel (1966a) conducted learning experiments with college art majors, varying three conditions between drawing sessions: feedback (process or product), evaluative criteria (self-discovered or external), and source of feedback (interactive or independent). Art quality and art strategies were influenced by process feedback and self-discovered evaluative criteria, while creative personality measures responded to interactive setting for evaluation. In another experiment, Beittel (1966b) found that strategies were subtly influenced by drawing stimulus conditions (still-life or mental stimulus) and greatly influenced by direct stylistic instruction (toward one or the other art strategy); the latter effects persisted beyond treatment sessions. He questioned the generalizations on the association of personality and creativity with drawing style.

Frankston (1966) described two programs (self-developed and prescribed) and two methods of teaching (spontaneous and divergent) and their effects on the art products of adolescents. The self-developed program of study appeared to fit the spontaneous teacher but influenced students toward the divergent strategy (and the opposite for the prescribed program). Teacher art strategies did not seem to affect student art strategies.

Hardiman and Johnson (1966) assumed that structured stimuli in the motivational phase of an art lesson would result in structured collage products, and nonstructured stimuli in corresponding products. Structured motivational stimuli resulted in collages which were more aesthetically sophisticated, with clustered compositions, while nonstructured stimuli resulted in works higher in personal symbolism.

Neperud (1966) found that eight selected visual elements could be learned effectively by fifth-grade children and incorporated in their drawings. The learning, however, interacted with teaching methods and student characteristics. He found that a teacher-centered method was superior to cooperative and child-centered methods in producing change and that female students and students with high IQ scores showed greater gains.

Additional References: Ball (1965); Pikunas (1966).

Teaching and Learning: Aesthetics and Criticism

Eisner (1966) developed art information (low-level cognitive functioning: recognition) and attitude inventories and applied these to samples

from secondary schools and colleges. Art information scores were found to be largely a function of grade level. Females and students from upper socioeconomic groups generally scored higher on both measures.

Wilson (1966) gave upper elementary students 12 weeks of special training (materials containing specific language categories) in how to perceive paintings, while a comparable control group did studio activities. Pre- and post-test descriptions of modern paintings were analyzed by a 28-category taxonomy on which 14 categories were significant and favored the experimental group.

Metzger (1965) exposed a kindergarten sample to a range of aesthetic examples for 24 days, and an adolescent sample for a similar period to a range of written narrative styles. Subsequent analyses of drawings and narratives led him to conclude that artistically valuable examples produced significant improvement and that the growth of artistic norms was largely environmentally determined. The report was insufficiently documented as a research.

Child (1964a) found that aesthetic judgment, as measured by an index, improved with grade level, that high school girls were superior to high school boys, and high scorers generally possessed the personality characteristics of high scoring male college students. A training program on what some experts consider better and poorer art produced improvement in aesthetic judgment (grades 4 through 10) which lasted at least one year; however, there was no consistent improvement or loss attributable to mere exposure to these materials. Child and Siroto (1965) reported that the same index of aesthetic judgment yielded significant agreement across two widely different cultures.

Additional References: Harris (1966); Pepper (1964).

Perception and Perceptual Training

McWhinnie (1966) established a perceptual set toward complexity-asymmetry in sixth-grade pupils and college students and compared these groups with art and control groups on the Barron-Welsh art scale and an adaptation of the Draw-A-Person Test. He found that the perceptual training group was not superior to the art group and some learning was measured for sixth-grade boys. Salome (1966) summarized research and theory relating to perceptual training and child art.

Munsinger and Kessen (1964) found figure preference to be a function of stimulus complexity and the perceiver's level of cognitive structure. Art students showed increasing preference for increasing stimulus variability, while unsophisticated subjects preferred intermediate variability. Terwilliger (1963) reported that pleasantness increased and then decreased as figure complexity moved progressively up or down from a subject's own adaptation level.

Berlyne (1966) summarized his studies on conflict and arousal as induced by surprising, ambiguous, and complex stimuli, showing their relationship to heightened attentiveness and motivational states. He used a range of visual stimulus properties: irregularity of arrangement, incongruity, heterogeneity of elements, random redistribution, irregularity of shape, asymmetry, etc.

Additional References: Gibson (1966): Pratt (1964).

Children's Drawings

Lewis (1963) found a relationship between grade level of pupils (kindergarten through 8) and preferred method for drawing spherical space, cubic space, and spatial depth. In expressing preferences for drawings which illustrated the developmental sequence, children chose those in which space was depicted more clearly than their own. Children in kindergarten were more naturalistically correct in depicting cubic space, but in later grades passed through naturalistically incorrect representations toward drawings which were both more complex and naturalistically correct.

Lansing (1966) described Piaget's stages of child development as they relate to the perception of spatial relationships. Elementary school art teachers were urged to emphasize concrete objects and events. Selected perceptual activities might improve a child's concept of space, but it was not clear that these served the ends of art education.

In his book, Harris (1963) presented an organized survey of research on children's drawings, discussed their clinical use, described nonintellectual and cultural influences on them, and summed up theories concerning the psychology of drawing. While emphasizing language behavior and cognitive development as shapers of the child's drawing, he acknowledged the importance of affect where concrete experiences were involved; concepts and percepts were seen as inextricably interrelated.

Interdisciplinary Approaches

At a seminar directed by Mattil (1966), papers on theory and method were presented by specialists representing philosophy, art history, art criticism, studio art, sociology, psychology, and curriculum construction, for developing research and curriculum competencies and innovations in art education. These position papers were enlarged upon by corresponding specialists within art education. The culmination of the 10-day seminar was the presentation of abstracts of proposed research by all of the participants.

Morris (1962) related certain aspects of picture making of the great apes to human art, concluding with six generalized "biological principles

of picture-making" (e.g., self-rewarding activation, thematic variation, calligraphic differentiation). He also distinguished between the "de-differentiated ambiguity" of modern masters and the "un-differentiated ambiguity" of child art. Alexander (1962) applied a cognitive theorist's viewpoint to change in children's drawings. Maintaining that all drawings are rule bounded, he explained change across drawings by three postulates: repetition (motor), random variation, and perceptual "leveling and sharpening."

Ecker (1963), working from a base in Dewey's aesthetic theory, described the artistic process as "qualitative problem solving," set off as such from scientific problem solving and guided by distinctive controls of its own (a "pervasive quality") which arise from the work itself. He proposed six stages as the artistic equivalent to Dewey's stages of reflective thinking.

Arnheim (1966) exemplified the emerging intellectual climate in the title of his book *Toward a Psychology of Art*. Although a collection of essays and not a sustained, integrated work, it further endorsed the belief that scientific and humanistic disciplines can deepen our understanding of art.

Additional References: Ackerman (1965); Feldman (1966); Munro (1963); Saunders (1964); Smith (1965); Wallach (1964).

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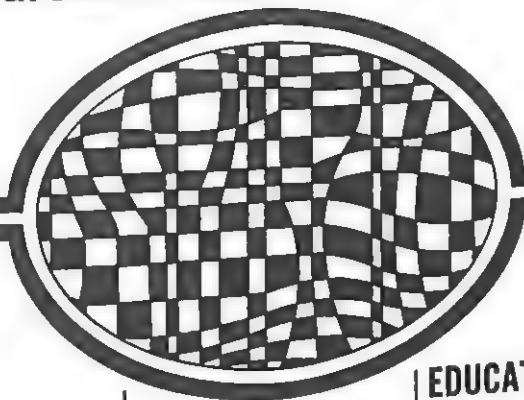
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June 1967

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since the issuance of Vol. XXXIII, No. 4, October 1963.

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FOREWORD

This issue of the REVIEW is concerned with the same array of topics that was treated in the October 1963 issue. But each of several chapters of that issue is represented in this one by two or more chapters. This breakdown was made to permit the more intensive treatment that separate authors could provide. Such a reorganization was suggested in the Foreword of the October 1963 issue.

Authors and chairmen of REVIEW issues frequently lament the quality of the research to be reviewed in their fields. The present chairman is disinclined to join this refrain. In the chapters and bibliographies of this issue, it seems to me, will be found much that scholars and research workers can employ productively. Ideas, distinctions, concepts, methods, and results appear in considerable abundance and are critically evaluated. No research worker in any of the fields treated should come away empty-handed from a careful reading of these chapters.

N. L. GAGE, *Chairman*
Committee on Teacher Personnel

CHAPTER I

Student Personnel Research in Teacher Education

ROGER E. WILK, WILLIAM H. EDSON, and JING JYI WU

In his review, Durslinger (1963b) endorsed a point of view toward the recruitment and selection of teachers as presented by Lindsey (1961) in *New Horizons for the Teaching Profession*. This report, developed under the auspices of the National Commission on Teacher Education and Professional Standards (NCTEPS), stated that the teaching profession has the responsibility for determining the student characteristics required in the preparation of effective teachers. Knowledge of such characteristics should guide recruitment and selection activities. The current reviewers accept this point of view but recognize that it is not held universally (Rugg, 1965).

Gage (1964) has observed that the variable called teacher effectiveness may be regarded as the dependent variable in the whole chain of variables with which student personnel workers in teacher education are concerned. He says, "The recruitment, selection, admission, retention, counseling, placement, and certification of teachers are all aimed at maximizing teacher effectiveness. Hence, in strict logic, at least, if not in actual practice, all the aspects of student personnel work in teacher education must wait for their validation upon the definition and measurement of teacher effectiveness." Dunnette (1963), writing about the prediction of job success, tells us that we should cease searching for single or composite measures of job success and proceed to undertake research which accepts the world of success dimensionality as it really exists. He says, "It would seem wiser to investigate the separate relationships between each of the predictors and each of the available measures of job success." Gage (1964) stated that teaching includes such different roles as disciplinarian, adviser, counselor, motivator, information giver, explainer, demonstrator, house-keeper, record keeper, curriculum planner, and evaluator.

In preparing the present chapter, the reviewers take the position that it is not reasonable to expect to identify the criterion of effective teaching, whether it be a single factor or a composite of weighted and summed factors. The search for predictors is more likely to be successful if criterion characteristics are dealt with one at a time. These criteria may be associated with different activities performed by teachers, or they may be necessary steps along the way to becoming a teacher, such as graduation from college with all that this implies about grade point averages, persistence, and occupational decisions.

After examining the NCTEPS position, the problem of effectiveness criteria, and the relevant research literature of the past three years, the

authors have formulated a framework that places the recruitment and selection of teachers in a broader context, namely, student personnel research in teacher education. The structure for the chapter is based on this framework.

Framework for Student Personnel Research

Edson (1963) and Wilk and Cook (1963) have presented a point of view and a framework for student personnel research. Three premises were stated by Wilk and Cook:

1. Colleges and universities preparing teachers implement their purposes for teacher education through the decisions they make about individuals. The principal points of decision making can be represented by admission, retention, and graduation. All three require that institutions decide about their students, and they do either by design or default.
2. Individuals who wish to become teachers implement their vocational goals through decisions they make about institutions. They must apply, enroll if admitted, and continue to graduation in a program of teacher education if they are to be certified for teaching.
3. Teachers entering the profession are the products of a sequence of interdependent decisions made by individuals and teacher education institutions. Individuals must apply, institutions must admit, individuals must register, institutions must retain, students must continue, institutions must graduate. An adverse decision by either the individual or the institution means that initial preparation for teaching cannot be completed.

These premises identify both the individual and the institution as decision makers. The decision theory model provides a "goodness-of-fit" with practice and a conceptual structure that gives perspective to research, although neither research nor practice is yet prepared to apply the sophisticated mathematical formulations of the theory.

In the decision theory view, student recruitment consists of those activities by an institution designed to influence the individual to make a decision to apply and, if admitted, attend. Studies considered in the following section on recruitment are those that test the effect of stated recruitment techniques on individuals' decisions or those that seek data about individuals who are making decisions about becoming teachers. Studies basic to the development of a strategy for influencing potential students of teacher education or studies which consider the outcomes of an influence strategy would also be appropriately reviewed in the recruitment sections.

Once students apply, the institution decides whether or not it should admit. Individuals who are admitted are subject to continuous review, which is in reality a sequence of retention decisions. Simultaneously, students review their decision to continue. Studies of admission and retention, which constitute a second section, are those in which the institution's decisions about individuals or the individuals' decisions about the institution are central.

In addition to the studies that focus directly on decision making, there is a body of research dealing with the characteristics of teacher education students. This research bears upon decision-making strategies and curricula in that it helps define the population that will prepare for teaching in any one college or ultimately in all colleges. These descriptive studies are reviewed in a final section of this chapter.

Recruitment

Pavalko (1965) compared the social background characteristics of high school seniors who selected teaching as their occupational choice with those who did not identify teaching as their future occupation. From a census study of Wisconsin high school seniors conducted by Little (1958), Pavalko selected for analysis a random sample of questionnaires from 5,004 boys and 5,317 girls. He concluded that among the total group of seniors teaching has a stronger appeal to the higher status youth, but that among the college-bound seniors teaching has greater appeal to those of lower status backgrounds. Among those going to college, teaching was of stronger interest to rural boys and girls than to urban youth. Those who planned to teach had higher measured intelligence than the total high school sample, but both boys and girls who planned to teach had lower intelligence test scores than those of the college-bound group.

Admission and Retention

Four questions about admission and retention are treated in recent research literature. What are current selection and retention practices? What are the results of institutional and individual decisions? What variables are useful in predicting subsequent behavior? What measurement concerns are relevant to admission and retention in teacher education?

Current Practices

Nunney, Fiala, and Lewis (1963) surveyed 98 four-year colleges and universities located in the Western states and having teacher education programs. The purpose of the study was to determine the extent of agreement on regulations and testing procedures. Over 90 percent of those

sampled responded to questions on when the institutions considered applications for teacher education and what data were used in making decisions. Approximately 60 percent of the respondents reported having a testing program for their applicants, and they employed a great diversity of tests. Nearly half the institutions accepted applications from sophomores who had completed specific courses and attained a satisfactory grade point average, but these colleges did not agree on the courses that were required prior to admission.

Durflinger (1963a) measured 66 personality and intellectual variables in 464 freshman and sophomore women who were interested in elementary education (K-8) and compared criterion groups four years later. He compared (a) those who graduated from the teacher education program, (b) those who were dropped, (c) those who transferred, and (d) those who withdrew. He found that (a) those who graduated had higher standardized achievement test scores and higher *Minnesota Teacher Attitude Inventory (MTAI)* scores than the other groups, (b) graduates differed from transfers and withdrawals on some of the *Strong Vocational Interest Blank (SVIB)* scales, and (c) transfers had higher ability scores than those who graduated.

Individual and Institutional Decisions

Wilk and Cook (1963) employed a persistence criterion in a teacher education institution to study the results of individual and institutional decisions, obtaining data for 2,388 students who were juniors in all teacher education curricula over a three-year period. From these students they selected 831 who were enrolled in four curricula for detailed univariate and multivariate analyses on 14 academic, biographical, and psychometric variables. The analyses compared women in elementary education, women in English and language arts education, men in mathematics and science education, and men in social studies education. The results showed significant univariate and multivariate differences among the four groups, substantiating the assumption that there are important differences among students in different teacher education curricula. Some differences, primarily academic, appeared between students classified as "persists" and "nonpersists," though no single variable or pattern of variables distinguished consistently for all groups. Although the retention rate varied somewhat among the curricula, between 85 and 90 percent of beginning juniors continued; this rate was judged to support the admission policies. Women in the elementary education curriculum who became juniors in the three successive years were compared, and although some differences were noted, these were not judged either to override the major similarities or to invalidate a longitudinal approach.

Sandven (1966) reported a national study in Norway dealing with the selection of students for the four-year course in teacher training colleges.

He developed a hypothetical qualification profile utilizing four factors proposed as desirable abilities and traits and showing in what measure they were needed to ensure adequate qualification. The four factors were (a) essential knowledge and insight, (b) intellectual capacity and able judgment, (c) coreactive tendency (sympathetic response tendency), and (d) security tendency (self-reliance response tendency). Subjects were 989 applicants for 450 vacant places in colleges. Admission decisions were made according to usual procedures, including a separate abilities test, rather than on the basis of the four factor tests. The results showed that admission decisions were not strongly related to the variables studied. The fact that individual institutions admitted students locally influenced the results. Sandven proposed further research as well as specific steps, including a national entrance competition, designed to improve admission decisions.

Allan (1966) selected from 215 secondary student teachers the 61 most successful and 65 least successful, utilizing the grade point average and the university supervisor's ranking as the basis for classification. On the basis of inventories administered to the two groups, he concluded that the most successful student teachers tend to be seen as more ascendant, self-centered, persuasive, planful, persistent, conforming, valuing intellectual activities, and having positive regard for authority figures. He added that in his opinion "greater success may be attained in future studies if separate prediction equations are computed for different subject matter areas."

Predictive Factors

Out of a concern about the predictive value of admission data, including interview judgments, regularly obtained in a university teacher education program, Wilk and Edson (1963) studied 36 women in elementary education student teaching. They assigned the subjects to schools in four geographic areas of similar socioeconomic character. The experimental variables were the students' preferred grade level assignment; the grade level to which assigned, i.e., upper grades or lower grades; the order in which students were assigned to the two grade levels; and the quarter of experience, first or second. Admission data included scholastic aptitude and reading tests; personality, attitude, and opinion inventories; high school rank, grade point average, and counselor judgment of need. Domains and need Integration based on an interview and test scores. The criteria were 10 classroom observations using Flanders' Minnesota System of Interaction Analysis and an adaptation of the Observation Schedule and Record (OSCAR) designed by Medley and Mitzel. They concluded that the interview, long employed in the screening process, is not useful if its purpose is to predict the classroom behavior of student teachers. Decisions should be made on the basis of information that does not include counselor judgments. A combination of grade point average and *MTAI* score pro-

duced a multiple correlation of 0.58, leading to the conclusion that if integrative verbal behavior of student teachers is prized, two areas of concern should be (a) the achievement of the student as measured by grade point average and (b) the attitudes of the student as measured by the *MTAI*.

Meisgeier (1965) studied the characteristics that might contribute to successful student teaching of mentally or physically handicapped children in an effort to establish criteria for the selection of prospective teachers of these children. Subjects were 41 juniors and seniors enrolled in student teaching in seven colleges. Using as a criterion measure an evaluation record developed for the investigation, he identified three significant characteristic-qualification patterns of his successful student teachers: achievement-ability-attitude, personal adjustment-general emotional stability, and dynamic energy. When he compared the scores of his subjects with the published norms for the standardized instruments he had used, he concluded that student teachers of mentally or physically handicapped children are a relatively unique group of individuals with characteristics different from those of other college students and other education students.

Cook (1964) examined a personal data form as a predictor of graduation from a teacher education program and entry into teaching. He analyzed 21 personal data items for 701 sophomores enrolled in a professional course. Eight items showed significant relationship to the eventual entry into teaching, and 10 to completion of the program. Four items were observed to be among those related both to graduation and to entry into teaching: sex, class at enrollment in the program, major teaching area, and veteran status. Although a larger proportion of men graduate, proportionately fewer enter teaching. Among students entering the program early in their college careers, the proportion of those who teach is higher than among those entering the program at a later date.

Simun and Asher (1964) studied the relationship of variables in undergraduate school records and the school administrators' ratings of first-year teachers. They examined the multiple correlations between 25 independent variables and 5 criterion variables: teaching ability, preparation of subject matter, discipline, tact with students, and cooperation with staff. They concluded that the best single predictors of ratings were student teaching grades, academic average, and faculty rating.

It may be argued that colleges preparing teachers should give attention to teacher attrition in their selection programs on the assumption that institutional resources should be expended on those who will teach. Van Atta (1964) developed a preliminary instrument based on 6 predictors derived from 48 variables in order that he might study attrition. He concluded that sex and amount of direct leadership experience with children were most generally predictive of dropout. He stated that in his study he found that for a male with less than 10 months of leadership experience with children, who was rated as fair by his general methods instructor,

and who had a grade point average of 3.00 or above, the probability of being in the teaching profession after three years was 0.87.

Measurement Concerns

Farr (1965) and Michael (1965) considered measurement questions relevant for admission and retention. Farr surveyed the use of measuring instruments in the 664 member institutions of the American Association of Colleges for Teacher Education. In the 443 institutions responding, 445 tests were reported in use, of which about half, 240, were listed in *Buros' Tests in Print*. Nearly all institutions reporting, 427, indicated that tests played a part in their decisions about students. Only 19 institutions were engaged in experimental projects for developing measures of outcome that could be used to assess the effectiveness of their teacher education program. Michael was essentially concerned with identifying future directions of research and administrative procedures that would increase the effectiveness of all college admission procedures. Though he considered the criterion problem, Michael suggested that important gains in predictive validity must come from the development of a comprehensive theory of the teaching-learning process. He proposed that institutional research centers be established to facilitate needed research, and he reviewed research in areas he believed to have potential.

Characteristics of Students

Academic Characteristics

Burnett and MacMinn (1966) made a comparison of teacher education students and nonteacher education students on five measures of academic aptitude and achievement: *Ohio State Psychological Examination (OSPE)*, *Ohio State Mathematics Screening Test (OSMST)*, *Ohio State English Placement Test (OSEPT)*, *American College Test (ACT)*, and the cumulative point-hour ratio (CPHR). Two conclusions were drawn from analyses of 10 sets of data from cross-sectional samples ranging in size from 376 to 4,913: (a) noneducation students obtained significantly higher scores on *OSPE* and *OSMST* and as freshmen performed significantly better on *ACT* than did education students, (b) education students had significantly higher CPHR and as freshmen did significantly better on *OSEPT* than noneducation students.

Usselton, Bledsoe, and Koelsche (1963) administered the *Sequential Tests of Educational Progress (STEP)* to measure the competence in science of 78 elementary education seniors in three Georgia teacher education institutions and found that (a) 47 percent of the group scored below the twenty-sixth percentile of University of Georgia sophomores, (b) 26 percent scored above the mean of the fourteenth-grade national

norm, and (c) 38 percent scored above the mean of the thirteenth-grade national norm. The authors concluded that these teacher candidates were generally inadequately prepared to teach science, although they did not present arguments for the relevance of the criterion measure. Age, education of parent, grade level of teaching preference, expressed interest in science, high school and college science grades, and overall high school and college grades were significantly related to competence in science as measured by the *STEP* test.

Bledsoe (1966) compared students in teacher education with others at Wesleyan College (Macon, Georgia) and reported that education students were of better quality. A larger percentage of the future teachers received scholastic and leadership honors than did the total groups. When compared to the total class, the students in teacher education scored higher on the CEEB *Scholastic Aptitude Test (SAT)* and on the social science and natural science sections of the *Graduate Record Examination*.

Psychometric Characteristics

A factor analytic study by Mori (1965) identified five factors which characterize the motivation for entering a teacher education program: economic, social, interpersonal, intellectual, and ethical. Mori referred to these factors as occupational values, and he postulated that the interaction between the individual student's attitude toward each of these occupational values and his needs for these values result in a decision to become a teacher. Cook, LeBold, and Linden (1963) compared factor analyses of education and engineering students' responses to the *Guilford-Zimmerman Temperament Survey (GZTS)* and the *Edwards Personal Preference Schedule (EPPS)*. The analyses yielded six factors, five of them common to both groups: social drive, social maturity, intraception, flexibility, and emotional maturity. A sixth factor, labeled authoritarian, was unique to the education group. The results of this study and one by Gillis (1964), who compared 701 education students with a norm group of 1,080 college students on Stern's *Activity Index*, seemed to fit well the traditional image of teachers as having stronger needs for acceptance, order, structure, social interaction, competitive gains, and being perceived as friendly and less aggressive, but having fewer intellectual needs. A study by Hamachek and Mori (1964) showed that education students in their sample were not more deferring, orderly, abasing, nurturing, enduring, and were not less autonomous, succorant, heterosexual, and aggressive than the college norm group on the *EPPS*. However, when sex was taken into consideration, female students expressed significantly stronger need for affiliation, succorance, nurturance, and change, but weaker need for dominance, aggression, and autonomy than male prospective teachers. These findings were consistent with those of Gillis (1964), who made separate analyses of responses for male and female education students.

Comparative studies of students in different teaching fields have received little or no attention from researchers in the past. Three recent investigations, however, have compared various characteristics of students with different teacher education majors. Yamamoto and Davis (1966) studied three groups, totaling 102 students, using measures of motivation, ideational fluency, and interprofessional attitude. They found two scales, critical motivation and power motivation, that differentiated the three groups. On both scales, majors in secondary education fields had higher scores than those in elementary education; the latter, in turn, had higher scores than prospective early childhood teachers. Soares and Soares (1966) studied majors in music, science, and physical education and concluded that students in the same teaching field shared similar patterns of personality characteristics, self-concepts, and self-adjustment scores.

Wilk and Cook (1963) selected four groups from their longitudinal study of teacher education students at one university for detailed comparisons on biographical, psychometric, and academic variables. The groups were (a) women in English, speech, and language arts education ($N=110$), (b) women in elementary education ($N=495$), (c) men in social studies education ($N=104$), and (d) men in mathematics and science education ($N=129$). In considering biographical variables among the four groups, they found that English, speech, and language arts majors had more often attended small public high schools located in smaller communities (less than 10,000 population) and entered education as juniors from off-campus colleges and universities. Elementary education women and social studies men tended to come from large high schools in urban areas, entering the teacher education curriculum as transfers from on-campus colleges. When compared with the female group, the male junior groups were older and their ages were more variable. Comparisons were also made on high school rank (HSR), the A.C.E. *Psychological Examination for College Freshmen* (ACE), the *Miller Analogies Test* (MAT), the *Reading Comprehension: Cooperative English Tests* (Reading), and the *Minnesota Teacher Attitude Inventory* (MTAI). Univariate comparisons showed that students entering the four groups were significantly different on each of the five variables. Women in English, speech, and language arts had the highest means on all variables except MTAI, on which elementary women were highest. Social studies men had the lowest mean HSR, women in elementary had the lowest mean ACE, MAT, and Reading scores, and men in mathematics and science had the lowest mean MTAI scores. The four groups were also found to be different in terms of their achievement. English, speech, and language arts majors had the highest overall grade point averages, followed in order by men in social studies, men in mathematics and science, and women in elementary education. Significant differences were found in their achievement in the first professional course sequence, and the means of the groups followed the same rank order as in the comparison of overall achievement. Results of

multivariate analysis indicated that nine of the variables could be weighted in linear combinations in such a way as to discriminate effectively among the four groups, providing evidence of the assumption of differences among students majoring in different curricula.

The *MTAI* was used as a measure of the extent to which teacher education courses or programs changed the attitudes of teacher education students. Brim (1966) administered the *MTAI* to 250 undergraduate education students at the beginning and end of the quarter. He concluded that the kind and level of professional courses that were taken that quarter were related to significant changes in attitudes toward children. Interviews with the 32 students whose *MTAI* scores increased most confirmed the influence of the program but also identified nonprogrammatic factors. Ofchus and Gnagey (1963) studied attitude change as measured by the *MTAI* in 701 female sophomores in a course in child growth. They found that the California F Scale, a measure of authoritarianism, was negatively correlated (-0.54) with change in *MTAI*. Dickson and others (1965) studied the *MTAI* scores of three sectional samples of American teacher education students as a part of their cross-cultural study. They found that both elementary and secondary majors in the second year of the program had higher *MTAI* scores than those in the first year. Elementary majors in the final year had scores as high as those in the second year, but secondary majors in the third year received scores as low as those at the first year. The general level of *MTAI* scores was higher for elementary than for secondary majors. Horn and Morrison (1965) were concerned whether the *MTAI* measured a unitary trait. They factor-analyzed the scores of 306 heterogenous education students from two institutions and identified five factors: (a) optimism-favorable vs. pessimism-unfavorable, (b) lack of concern vs. punitive concern, (c) rejection of pupils vs. bewilderment, (d) concern for "smart" vs. concern for "rebellious" behavior, (e) "control" vs. "let them run free."

Dickson and others (1965) conducted a well-planned and wide-scale study to compare various patterns of characteristics of prospective teachers in the United Kingdom and the United States. Elementary and secondary majors were studied at three levels of preparation. The instruments included (a) measures of academic achievement: the *Comprehensive College Tests* (ETS) for the fields of English, composition, natural science, and humanities, and *Cooperative General Achievement Tests* (ETS) for mathematics; (b) measures of professional knowledge: *National Teacher Examination* (ETS) for child development and educational psychology, guidance and measurement, instructional methods, and elementary school education; (c) measures of personality characteristics and professional attitude: Ryans' Teacher Characteristics Schedule and *MTAI*; (d) measure of mental ability: *Cattell Culture Fair Intelligence Test*. The investigators drew the following conclusions: (a) education students in the United Kingdom (UK) had higher scores in the fields of fine arts, literature,

and mathematics but were lower in science than their counterparts in the United States (US): (b) the UK group performed less well on professional knowledge measures: (c) the UK group was more child-centered and less learning-centered than the US group: (d) the UK sample had a tendency to score higher on general intelligence and verbal comprehension than the US sample: (e) the UK group expressed less favorable attitude toward their school administrators and personnel workers than did the US group, these results being based on an analysis of Ryans' "Q" inventory scores which were later confirmed by observations during the investigators' visits to the sampled institutions in the United Kingdom. The authors caution about generalizations since the participation of teacher education institutions in the United States did not materialize as planned.

Summary and Conclusions

Two general questions seem worthy of consideration in a critique of the literature reviewed here. First, how relevant is the research of the last three years to student personnel work in teacher education? Second, how strong are the studies reported in terms of methodology, irrespective of their relevance?

Regardless of whether the choice of a criterion is "effective teaching" or "effective decision making," the research for the three-year period does contribute some knowledge useful in student recruitment, admission, and retention. One result does emerge clearly: There are differences among students in different teacher education majors. These differences are well enough established that both personnel practice and research should be affected. Institutional admission standards ought to take these differences into account. Research ought to control or identify variability due to these differences. If institutional practice and research combine or pool teacher education majors for the administration of policy or the testing of hypotheses, it should be clearly demonstrated that such "pooling" is reasonable in terms of specific relevant variables.

The quality of students in teacher education ought to be an institution's continuing concern. Research should describe the institution's "pool of talent" from which teacher education students are recruited. With knowledge of the student population, standards can be set to admit and retain students who are appropriate for the teacher education programs. Continuing research should describe the effectiveness of the established standards, providing data for a kind of quality control. Several studies in this review—for example, Bledsoe (1966) and Burnett and MacMinn (1966)—have taken the approach of employing arts college students as a group against which to judge the quality of teacher education students. Though such studies may be interesting, they do not speak directly to the question of whether teacher education students are of appropriate quality. The

empirical data from these descriptive-comparative studies are especially limited because adequate conceptual foundations or behavioral referents are lacking.

Our comments thus far have implied that teacher education institutions have a responsibility to conduct research on their students. Michael (1965) has suggested one approach for the total institution. The reviewers take the position that research should be an integral part of the student personnel program in teacher education. The need for such a research approach can be inferred from the survey of teacher education institutions conducted by Farr (1965). His findings on the diversity of tests employed in personnel decisions, the widespread use of locally developed tests, and the apparent failure to assess outcomes substantiate the need for student personnel research in teacher education.

As for the methodology of the studies reviewed, one must recognize that they varied from quick analyses of small groups to longer-term studies of considerable magnitude. They varied from short journal pieces with minimal data to lengthy final reports on contract research. Journal articles often lacked adequate reporting of basic data (Bledsoe, 1966; Durflinger, 1963b; Uselton, Bledsoe, and Koelsche, 1963). Whenever such criterion measures as "successful" teachers (Allan, 1966), or administrators' ratings of performance variables (Simun and Asher, 1961), or new criterion instruments (Meisgeier, 1965) are employed, the interpretation of the findings must recognize the inherent problems of the criterion measures.

Collier (1961), in his review of the methodology of the teacher education studies summarized by Cyphert and Spaight (1961), noted that few of these studies were experimental. Again, the studies in this review are descriptive with one exception (Wilk and Edson, 1963).

The study of teacher education students is an important approach to the larger study of teacher education, as the reviewers believe and as a joint committee on studies and standards asserted in its 1954 report (AACTE, 1954), but the research reviewed here has hardly realized the potential of this approach.

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CHAPTER II

Preservice and In-Service Education of Teachers

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The period covered by this review was a highly significant one for American teacher education. The intense interest in teacher education on the part of both professionals and laymen noted by Reynard (1963) was, if anything, heightened. Thus, the Carnegie Foundation persuaded James Bryant Conant (1963) to undertake a two-year study of the education of American teachers, and the report of that study headed, for many weeks, the best-seller list of American nonfiction. Similarly, one can note the attention given to the controversy over NCATE and the accreditation of teacher education, a subject treated in another chapter.

Clearly the best known, most controversial, and in that sense at least, most significant large study of teacher education was that by Conant. Visiting 77 institutions in 22 states, Conant and a team talked with administrators, faculty, and students, observed classes, and studied programs through the examination of catalogs, course outlines, and textbooks. Twenty-seven recommendations emerged, concerning certification requirements, practice teaching, the establishment of clinical professors, an all-university approach to teacher education, and master's degree and in-service programs for the continuing education of teachers.

Cartwright (1964), a staff member of the Conant project, summarized his views that the essence of the study included pleas for (a) much trial and study of the teaching process and of teacher preparation, (b) minimizing of regulation and certification requirements, (c) major reliance upon colleges for the development of programs and for certifying the competence of the products of those programs, and (d) direct responsibility of schools for participation in the preservice education of teachers.

Reactions to the Conant report came from many quarters. Koerner (1964) registered his delight with "this very imperfect, incomplete, inconsistent, sometimes impressionistic, often woolly-minded but courageous and apocalyptic report." Analyses by Brickman (1964) and Anderson, Burnett, and Klassen (1965) were critical of the study, suggesting a lack of scholarship in the appraisal and a failure to supply any evidence for many of the assertions and conclusions drawn. A *Journal of Teacher Education* symposium (Edelfelt, 1964) registered varying opinions of the educators in schools and colleges. The Seventeenth Yearbook of the AACTE (1964) included a report of an opinionnaire survey made at the Association's annual meeting, disclosing that 178 of 191 respondents indicated no changes or plans for change resulting from the study. One conclusion reached from the opinions sampled by 21 reporters in their local

regions (*Phi Delta Kappan*, 1964) was that much of the hostility to the proposals resulted from a conservative reaction to any change. Forty-eight institutions reported some, if only incidental, influence, while 10 acknowledged substantial influence, as, for example, Wisconsin's report that it was negotiating a research grant to test Conant's recommendation that certification be based on field judgments of teaching competence. Nearly all persons polled were in favor of adopting some of the recommendations, but there was little agreement on which ones. One conclusion was clear—that the “establishment” was not devoted to any narrow consensus.

In a study of 63 institutions involving many of the same procedures utilized in the Conant project, Koerner (1964) noted (a) considerable ferment in teacher education, (b) an appalling lack of evidence of connections between training and performance, (c) administrative inertia and mediocrity among education faculty and student body, and (d) repetitious, dull, ambiguous course work in professional studies, often accompanied by poor academic work as well.

Since 1960 major efforts have been made by the Fund for the Advancement of Education and the Ford Foundation to bring about a series of what they called “breakthroughs” in teacher education. A sum of \$29 million was allocated to 39 institutions. Saxe (1965) reported on an attempt to evaluate these “breakthrough” programs. He concluded that the data available could not support an evaluation of the Fund's efforts to assess the national impact of the projects.

The interest of the federal government in the preparation of teachers also accelerated markedly during this period. Cyphert and Spaight (1964) published a report on a USOE conference on research in teacher education, including a useful annotated bibliography. Wilhelms (1964) reported on a five-year exploratory project at San Francisco State College. “Impressions” of the project were positive, pointing particularly to the similar account of learning of the students in the new program as compared with that in the old, although much less structure was present in the exploratory program. Another institutional program of an experimental nature was reported by Turney and Stoneking (1965). This one featured a year of teaching at full pay, cooperative field experiences arranged with five school systems in different states, and opportunity for individualized study plans during the summer. The evaluation of the program was disappointing, however, because of its informality, depending largely upon interviews and supervisor ratings.

Smaller studies dealing with the professional education sequence were also reported. Humphry (1963) surveyed professional education offerings in 248 NCATE-accredited institutions and noted that while 200 different professional course titles were uncovered, the use of the same basic texts for many of these opened to question the uniqueness of many of them. The problem of getting behind the labels was treated by Tyler and Okumu (1965) in a report on a plan for analyzing courses in teacher education

utilizing classifications from Bloom's (1956) *Taxonomy of Educational Objectives. Handbook I: Cognitive Domain*.

Beery (1962), examining the difference in teaching effectiveness of those meeting full certification requirements and those lacking part or all of the required professional courses, found significantly higher ratings of the former teachers by trained observers. Whiteley (1964) found that graduates of accredited teacher education programs tended to remain in teaching longer than those from unaccredited programs and tended to be more stable in their communities and assignments.

The period was also marked by a series of studies and reports undertaken by professional organizations, among them the American Association of Colleges for Teacher Education (1964), the National Commission on Teacher Education and Professional Standards (1963), the Association for Supervision and Curriculum Development (1963), and a study jointly sponsored by the Modern Language Association and state certification directors (*Modern Language Journal*, 1966). Each of these reports represented an effort to identify problems and issues or to develop consensus through seminar and conference sessions on approaches to teacher education. The Forty-Fourth Yearbook of the Association for Student Teaching (1965) was an especially useful effort to link theory and practice in teacher education by considering theoretical statements by Andrews, Eye, Flanders, Rivlin, and Ryans and their implications for laboratory experiences. A chapter by Lee (1966) in the Sixty-Fifth Yearbook of the National Society for the Study of Education made an historical analysis of the changing role of teachers and of teacher education over the past 25 years.

A study supported by the Fund for the Advancement of Education brought together a group of educators actively involved in teacher education projects supported by the Fund to critically appraise the professional aspects of teacher education. As reported in a volume edited by Smith (1962), the group agreed upon five interrelated parts as essential to the process of teacher preparation: (a) a liberal education, (b) specialized knowledge of the subject to be taught, (c) professional knowledge, including understanding of the role of the school and contributions of the behavioral sciences, (d) practice teaching under adequate supervision, and (e) unifying theory. These categories of essential program elements, while not new, represent a useful framework within which to consider more specialized studies of teacher education which are reviewed in the remainder of this chapter.

Additional References: Preston (1964); Scherwitzky (1964).

General Education

Although the general or liberal arts aspects of the education of teachers are said to be crucial for the program, no direct research on general edu-

cation as it relates to teacher education was located by the reviewers. But some peripheral studies or statements were made. Woodruff (1964) suggested that a shift was desirable from a teacher education curriculum consisting of verbal facts to one consisting of organized knowledge, with emphasis upon the organization of subject matter rather than upon methods of instruction. Bednar and Parker (1965), using three Guilford tests, found no significant differences between honors program students and others at Brigham Young University in growth in creativity, either at the junior year or over the three-year period (freshman to junior year). Parkinson (1964) reported a substantial trend for students below the fiftieth percentile (ACE) at Miami University in 1960 to transfer from arts and sciences to the School of Education.

Emphasis on Substantive Knowledge

Research relating to the role of the disciplines, *per se*, was equally disappointing. Groff (1962) reported that self-estimates of teaching ability in various subject areas by 645 California elementary student teachers revealed feelings that preparation was strongest in reading, especially, and in arithmetic, spelling, social studies, and science. Weaknesses were felt in the areas of handwriting, written composition, music, oral language, physical education, and art. No studies were reported on the effectiveness (in terms of student learning) of those with majors versus those with minors in various areas. Nor was any research reported on the effectiveness of students taught their subject matter at the college level organized by the structures of the disciplines. Although data may be available concerning improvement of instruction through in-service education relating to new discipline-structured school programs, no published reports could be located.

The Professional Education Sequence

The professional education sequence has been separated from studies of student teaching and field experiences to facilitate convenience in reviewing as well as to conform to the structure proposed by the Smith (1962) volume. Studies of the selection and characteristics of students in teacher education programs are reviewed in Chapter I. This section deals with variations in methods of instruction, use of the newer media, the role of social foundations, and evaluation, primarily in specific courses.

Instructional Methods and Media

After student teaching, the most frequently studied area of teacher education was instructional methods and media. General concerns here included the utilization of simulated and programed material, comparisons

of methodology, effects of feedback procedures, and, finally, variations in class size.

Concern with the efficacy of the lecture method versus group discussion and/or laboratory experiences continued. Gordon (1963) reported a study of students in human growth and development courses where a laboratory (psychological) approach was compared with a logical presentation. Students in the experimental group responded more often in terms of process, and control students more often in terms of content, at the conclusion of the project. Ingle and Robinson (1965) reported no significant differences in *Minnesota Teacher Attitude Inventory (MTAI)* scores between students released from one class a week (to observe in schools in an educational psychology course) and those who spent all three sessions in class.

Withall (1963) and DeVault and others (1964) reported results from the Wisconsin NIMH-sponsored teacher education study. Six credits of educational psychology were taught to three groups by three methods (case study, concept-centered, and learner-centered). Children's reactions to student teachers who experienced the three patterns were examined. Generally it was found that the variance in children's reactions was as wide within as between groups.

A report by Sarason, Davidson, and Blatt (1962) suggested that more than knowledge of content in educational psychology is needed and that practice needs to be integrated and related to aims, concrete phenomena, and problems of teaching.

An AACTE (1963) survey indicated widespread interest in the study and use of programmed instruction. Hough and Revsin (1963) found no significant differences in learning among 90 Temple University secondary education students in three separate programming approaches: (a) a machine, (b) a programmed text without reinforcement frames, and (c) a programmed text using reinforcement frames after each item. Schutz and Baker (1963) examined implications and described recent curriculum modifications that should be of interest to those concerned with research in this area.

Considerable interest in the use of audiovisual tapes, usually for television use, was evidenced by a sizable number of studies. The major emphases were upon the use of simulation or vicarious experiences as compared with actual field observations, the effects of visual feedback of performance on student teacher learning, and comparisons of television instruction with regular class instruction.

Studies reported by Chabe (1962), Fulton and Rupiper (1962), Schueler, Gold, and Stoller (1964), Stoller, Lesser, and Freedman (1964), and Woodward (1964) supported the contention that kinescope and live television are more effective and less time consuming than are direct observation procedures. Rumford (1962) reported that television was generally for teaching an elementary school methods course which included opportunities for observation of classroom teachers. Utsey, Wallen, and

Beldin (1966) found that the use of a series of instructional films which simulated a teacher's administration of a reading inventory was a significant factor in developing the skill of college juniors and seniors in identifying reading levels of children.

An unusual study by McNeill (1962) found that providing immediate knowledge to teachers of selected effects of their teaching on pupils by means of a four-color "answer light" did not significantly increase the frequency of teaching behavior judged to be appropriate. Bushnell (1963) reported the use of the classroom simulator to present film clips of classroom situations and alternative films to be selected by the supervisor when student teachers respond.

Evaluation

A promising instrument, called the "Teacher Situation Reaction Test," was developed by Duncan and Hough (1966), and it is presently being validated. Mayo (1964) reported that experts could not agree on the placement of measurement content in teacher education programs but could agree on general content to include it somewhere, and Ebel (1966) reported the implications of a review of research on measurement applications in teacher education.

Additional Reference: Brim (1966).

Student Teaching and Internships

In an era of widespread criticism, it is noteworthy that there seemed to be a little disagreement about the desirability of classroom practice under supervision. Whether such field practice should consist of student teaching or of an internship remained in doubt, with little research related to one approach versus the other. A majority of programs receiving foundation support incorporated paid internship experiences, even though most teachers continued to be prepared in institutions utilizing student teaching.

Shaplin and Powell (1964) provided an historical overview of internships, comparing the programs characteristic of different periods, and identified as significant these current developments: (a) recruitment from strong liberal arts colleges, (b) replacement of gradual induction by total immersion in day-to-day teaching problems, and (c) increased emphasis on continuing education as preservice programs are telescoped. Stone and Robinson (1965) reported on the California-Berkeley experience with a graduate internship program emphasizing integration of theory and practice, team teaching and supervision, avoidance of compartmentalized separate courses, and high admission standards.

In contrast to a study by Mercer (1964), which seemed to show no special pattern for student teaching, a survey by the North Central Asso-

ciation of Colleges and Secondary Schools (1963) found that a great majority of the systems reporting provided student teaching on either a half-day or a full-day basis.

In view of the importance attached to supervised practice, it is not surprising that perhaps the largest number of teacher education studies were devoted to student teaching and its impact. Thompson (1963) examined the anxieties experienced by student teachers and found that those linked to anticipation of the experience were often greater than those arising from the assignment itself.

Several studies attempted to ascertain the usefulness of different sources of data about student teachers. Veldman and Peck (1963) found that secondary school pupil reactions were correlated with self-inventories of student teachers and with supervisor ratings. Jalbert (1966) reported that systematic training in the evaluation of classroom instruction helped student teachers to be more effective in evaluating both their own and others' teaching.

Research aimed at exploring the factors associated with the effectiveness of the student teacher tended to focus either on the nature and sequence of professional experiences preceding student teaching, as in the studies by Henry (1963), Pinckney (1962), and Popham (1965), or upon the quality of supervision provided. Grey and Greenblatt (1963), in a project involving use of a supervisory team, found some tendency for student teachers to perceive child behavior more negatively at the end of the term, while Bills, Macagnoni, and Elliot (1964) found less rather than greater openness among a group of student teachers, with the changes significantly related to the openness of their cooperating teachers but not to that of their college supervisors. In some contrast to this latter finding, Bennie (1964) found that beginning teachers reported having received slightly more supervisory help from their campus supervisor than from their classroom cooperating teacher. Many reports and studies emphasized the importance of both careful selection and training of cooperating teachers.

An important question unanswered by many of these studies is that posed by Swineford (1963) concerning the relationship between student teaching behavior and subsequent competence as teachers in service. His investigation disclosed that half the teachers studied were still teaching in much the same way they had taught in student teaching and that a number of them actually went down in their ratings rather than improving with experience. A concern for the development of decision-making qualities among teachers was reflected in a study by Macdonald and others (1965) which assessed the impact of involvement in a research-oriented student teaching experience.

Additional References: Amidon, Kies, and Palisi (1966); Andrews (1961); Brinegar and Laymon (1966); Haberman (1965a,b); Hirely

and others (1966); Hoover, Kaiser, and Podlich (1965); Swineford (1964).

Unifying Theories

A number of writers saw teacher education research as needing conceptual frameworks by which to plan programs and design efforts to assess the impact of such programs on subsequent behavior (e.g., Goodlad, 1962; Howard, 1963; Wattenberg, 1963). The latter called for the mounting of a large-scale multidiscipline search for basic principles and their application, rather than the current "tinkering." Both Goodlad (1965) and Sorenson (1966) called for a balance between theory and practice, between building a conceptual framework for the teacher and developing fundamental beginning skills. Broudy (1965, 1966) projected a useful framework for organizing teacher preparation emphasizing a body of systematized knowledge organized in terms of the distinctive problems of practice. Combs (1965) provided another provocative point of view based upon perceptual psychology and the concern for values and man's search for being and becoming.

One of the most promising efforts to formulate a useful theoretical framework for organizing the field of teacher preparation was that reported by LaGrone (1964). He placed emphasis on the analytical study of teaching, the structure and use of knowledge, concepts of human development and learning, teacher-learning strategies, and the evaluation of teaching competencies. Suggestions were frequently made (cf. Cyphert and Openshaw, 1964) that teacher education programs be based upon data and theory emerging from studies of teaching and classroom interaction. It was suggested that the use of interaction systems could have important instructional implications for teacher education. Amidon, Kies, and Palisi (1966), Flanders (1963), Hermanowicz (1963), Joyce and Hodges (1966), Medley (1963), Ryans (1963), and Waimon (1963) were among those who proposed techniques or discussed implications of these developments for teacher education.

Reports from Stanford University (e.g., Allen, 1966) were of special interest. The concept of microteaching and the identification of "technical skills" in teaching, when placed into the broader professional program, are innovations in theory and technique that appear promising.

In-Service Education

Research on in-service education, considered as an integral part of teacher education, was disappointingly scanty. Changes in media, materials, curricula, and conceptions of the role of the teacher all suggest the need for more effective continuing education for every teacher.

A survey for the National Commission on Teacher Education and Professional Standards, edited by Brandt (NEA, 1965), analyzed 397 brief reports on current and promising practices in in-service education and discerned trends toward (a) more released time during the school day for in-service education, (b) compensation for time when outside the regular day, week, or year, (c) extending the school year to provide in-service program time, (d) greater use of school system personnel to staff such programs, (e) regular budgeting for such activities, (f) participant involvement in planning, and (g) a continued absence of systematic evaluations using concrete data. Two NCTEPS reports (1966a,b), one concerned with the beginning teacher and the second with the career teacher, contained proposals for program innovations and studies of current issues and problems. These proposals suggest the need to look at teaching roles as differentiated in ways beyond the grade level and subject field distinctions.

Mosfitt (1963) described a Utah project aimed at developing methods of identifying meritorious teaching, after creating and using a code for describing teaching functions. The use of such a code by teachers was seen as being of value in assisting them in improving their teaching. Among the few more carefully structured attempts to assess in-service programs were those by Flanders (1962), which used interaction analysis, and by Costin and Kerr (1966), which investigated the impact of a mental hygiene course upon teacher attitudes concerning mental illness.

Conclusions

It is apparent from a review of the literature that the large grants for teacher education have been given for program development and not for theory development or research activity. A number of funded projects seemed to hold real promise because of their broad scope, but they proved disappointing because, as Halliwell (1964) noted, projects referred to as experimental nearly always turned out to be demonstrations, entailing only minimal, loosely structured evaluations of the program consequences. In contrast to these large, well-supported projects, numerous studies reported by individual researchers showed evidence of more care in research design, with provisions for controls and systematic evaluation. For the most part, however, these projects tended to be focused on small portions of the total process of teacher preparation, so that their impact seemed inevitably insignificant.

Even casual perusal of the research literature reveals a lack of theory. It is, indeed, almost impossible to identify the theoretical basis for most of the studies reported. As a consequence it is often difficult to relate studies to each other or to identify the need for new studies. This lack of integrating framework has resulted in an obvious divorce of theory and practice. While progress has been made in developing practice in a narrow

professional range, teacher education still appears to be fragmented and detached both from teaching and from programs of liberal or general education. It would appear that the most needed next step is to put large resources into research and development on a theory-based program of considerable breadth and scope.

A number of promising areas for research, however, appeared to be opening. These include the study of preservice-in-service relationships, teacher role differentiation, programs for teachers of culturally disadvantaged youth, and programs built around the integrated use of newer media. A quick mention of their status follows.

An area in special need of expanded study is the relationship between preservice and in-service teacher education programs. Recognition of the growing complexity of the teacher's role, as knowledge expands and society turns more frequently to its schools for help in solving pressing social problems, makes apparent the need for effectively linking pre- and in-service education efforts. Again, to improve the relationship between these efforts requires a conceptual structure that will aid in determining the specific functions assigned to each.

Another dramatic disparity between the amounts of program activity and research was found in the preparation of teachers of the culturally disadvantaged. A survey of such programs by the NEA Research Division (1966) reported that 9 systems in 10 enrolling 50,000 or more students were providing some type of training programs to assist their teachers in working with culturally disadvantaged pupils. Indications were that over 100 institutions were offering special programs for training teachers of the culturally disadvantaged. Yet no research was being reported, perhaps because the field was still quite new and the programs initiated were still in preliminary stages.

One report, that of the School-University Teacher Education Project (Usdan and Bertolaet, 1966), represented a promising cooperative effort by member school systems in the Research Council of the Great Cities Program for School Improvement and cooperating colleges to provide pre- and in-service programs better designed to prepare teachers for work with disadvantaged youth. The report provided a valuable and important framework for planning programs and evaluating their success. Another helpful statement describing a pattern for urban teacher education was that reported by Rivlin (1966). It is to be hoped that ideas from reports like these will become features of new programs with adequate attention to the assessment of their consequences.

Another area meriting expanded attention in the future is the use of video tape and other new media as a facilitating link between foundational concepts in teacher education and the practice of teaching skills. The inefficiency associated with unstructured field observations and practice in teacher education can perhaps be reduced through skillful use of the newer media to illuminate important concepts about schools and teaching

by use of specific examples and to systematize practice around a theoretical framework.

A number of discussions of reports and descriptions of teacher education programs in other countries were available. Most, however, were simply descriptions of programs without formal evaluation reports. A notable exception was a study done by the University of Toledo Research Foundation (Dickson and others, 1965) on a comparison of teacher education students in the British Isles and the United States. Generally, U.S. students scored lower in general intelligence, verbal comprehension, permissiveness, and most academic fields. They scored higher on tests of professional education knowledge. In future reviews more attention should be paid to this aspect of teacher education than the current reviewers were able to give.

A tremendous amount of work remains to be done. It is to the credit of teacher educators that they are willing to admit a lack of knowledge and to attempt research on the problems of the field.

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CHAPTER III

Teacher Certification

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The unexpectedly large teacher shortage which became evident with the opening of schools in the fall of 1966 doubtlessly adds new impetus to the perennial flurry of criticism leveled at certification requirements. The increase in shortages is attributable to the inroads on teacher supply caused by the Elementary and Secondary School Act of 1965, the manpower demands of the Viet Nam war, the increased appeal of graduate work, and the stiffer competition of industry for college graduates. According to the NEA Research Division (October 1966), despite the greatest number of graduating teachers in a single year in history—200,919 during the 1965-66 school year—the shortages greatly increased. On the basis of the highest criterion used, the demand for teachers exceeded the supply for the 1966-67 school year by 169,300 (141,800 in elementary and 27,500 in high schools). This situation will result in demands, among others, for reform in certification.

Teacher education, certification, and accreditation are, of course, integral parts of one process—the production of an adequate supply of qualified teachers. They cannot be separated as discrete entities but must be considered as a whole. While there are other important factors involved in achieving an adequate teacher supply, these three factors quite naturally will be subject to critical scrutiny in the search for causes of the shortages. Already there are renewed appeals to adjust certification to allow personnel with substandard preparation into the classroom, presumably by still greater resort to emergency credentialing. The pressures to adapt certification requirements for college graduates with substandard backgrounds of experience with some relevance to teaching will increase in intensity. The NEA TEPS Commission (1965) issued an appeal for adjustments for Peace Corps returnees; also, Denmark (1966) reported that TEPS's Non-Conference Year proposed enlarged use of paraprofessionals and technological aides.

Before examining the criticisms, it would be helpful to analyze current requirements of the 50 states, the District of Columbia, and Puerto Rico. Among these jurisdictions, there are great diversities and many similarities.

State Similarities and Differences

Stinnett (in press) reported that all but four states (Nebraska, North Dakota, South Dakota, and Wisconsin) and Puerto Rico require the

bachelor's degree for initial certification of elementary school teachers. For secondary school teachers, all states require at least the bachelor's degree. Arizona, California (also for elementary teachers), and the District of Columbia require five years of preparation, but the full enforcement of this requirement is not in operation in the first two. In addition, 18 states require completion of a fifth year of preparation during teaching on the initial certificate, for either elementary or secondary teachers, or both; but only 11 states mandate the time period, ranging from 5 to 10 years, for completion of this fifth year. The most pronounced upgrading in initial requirements in recent years has been that for superintendents of schools. In 1967, 49 states require the master's degree or above, and 20 states require six years or more of preparation. Of these 20 states, 18 require six years, and 2 require the doctor's degree or seven years of preparation.

For elementary teachers, the range in professional education requirements for degree certificates is from 15 to 36 semester hours; the mode is 20 and the median is 24. For secondary school teachers, the requirements in professional courses range from 12 to 29; the mode is 18 and the median is 18. Five states do not specify the number of hours but leave the specification to the preparing institution.

Although the specialization requirements have been significantly increased in recent years, this trend may be expected to continue with the proliferation of larger high schools. In English, for example, the requirements for full-time teaching range from 15 to 40 semester hours; the mode is 30 and the median is 28. In some special fields (agriculture and home economics, for example), the specialization requirements tend to be significantly higher than for the academic fields.

Le Sure (1963) suggested that the historic role of certification requirements in tending to prescribe teacher education programs is on the way out. His point is that state requirements set minimum standards, minimums aim only at adequacy, and adequacy may result in mediocrity. Counting credits on a transcript is not an adequate measure of quality. Only the preparing institution dedicated to quality can select and prepare teacher candidates and measure the product of its program.

The developing trend in the direction of institutional autonomy in defining teacher education programs, within the framework of general provisions by the state, is reflected in the adoption of the approved program approach. Armstrong and Stinnett (1964) defined this as certification of an applicant largely on recommendation of the preparing college that the applicant has completed a program in a specified field or area, the program being approved by the state department of education. This implies that the particular program has received prior approval and that certification is automatic upon recommendation of the institution. Since this procedure applies only to in-state institutions, it follows that out-of-state applicants will have their credentials evaluated in terms of the prescribed certification requirements, at least until there are more generally

accepted criteria for national reciprocity. Armstrong and Stinnett (1964) reported that 10 states used the approved program approach in some degree.

Additional References: *Audiovisual Instruction* (1965); Camp (1963); McAdam (1961); Maul (1965); NEA Research Division (1966); Reisert (1964); Wiley (1966); Woellner and Wood (1967).

Reciprocity in Certification

The trend clearly is toward deriving a nationwide plan for the free movement of teachers across state lines. This attempt at reciprocity was first tried in the early 1890's with an exchange-of-certificate plan originating with the New York State Education Department; and by 1921, a total of 38 states had embraced the plan (Stratford, 1912). However, the plan has now been abandoned. In the late 1930's, contiguous states began to develop regional reciprocity compacts (Armstrong and Stinnett, 1964). Compacts developed since then are those of the Southern Association (1941), Ohio Valley Association (1931), North Central Association Studies (1911-19), and the Central States Conference (1916). The Compact of the New England States, New York, and New Jersey (1919) was later extended to Delaware, Maryland, and Pennsylvania under the title "Northeast Reciprocity Compact." Still later, accreditation by the National Council for Accreditation of Teacher Education (NCATE) became a significant base for reciprocity. Armstrong and Stinnett (1964) reported that 17 states were members of regional compacts and 21 states were making some use of NCATE accreditation to expedite the movement of teachers across state lines. Thus, 14 states in 1964 had some formal arrangement for reciprocity.

Stinnett (in press) reported that all the regional agreements have fallen into disuse except the Northeast Reciprocity Compact, in which 11 states are involved. A total of 24 states are making significant use of NCATE accreditation to facilitate reciprocity, and 13 states report some use. While most state departments seem to believe there is for teachers a great degree of freedom of movement across state lines, graduates in a degree program of teacher education in an accredited college (not necessarily in one holding NCATE accreditation) still face the irritating imposition of specifics on migrating teachers. In view of the increasing mobility of the population in general—some estimates indicate that as many as 25 percent of all American families move to new addresses each year—more clearly defined and accepted reciprocal arrangements are needed. The U.S. Office of Education has made a grant to the New York Education Department for a study of "teacher mobility," ostensibly aimed at bringing about a more effective system for teacher mobility among states. The study, termed "Interstate Certification Project" (Lierheimer, 1965), will probably result in a proposal for a legal compact requiring enactments of the respective

state legislatures. It appears likely that the newly organized Compact of States will inaugurate research on several major problem areas, one of which will study interstate relationships in teacher certification. Lieberman (1960) advocated national certification of teachers. By this he meant that the number and kind of certificates and the requirements for each should be substantially the same in all states. His proposal did not necessarily call for the issuance of certificates by the federal government, but probably the acceptance by states of a common set of requirements. This proposal, if it could be implemented, could result in effective national reciprocity as well as simplification of the certification process.

Additional References: Brissenden and Dickey (1965); Mayor (1965); NEA Commission on Safety Education (1965); NEA Research Division (1965); Reisert (1966); Simandle (1965).

Certification Authority

The rapidly growing trend among the states in recent years toward vesting in the chief state education agency the authority to set requirements and to issue, reissue, and revoke certificates is now virtually complete. In most states, of course, legislatures specify some minor requirements, such as age, citizenship, special courses, and loyalty oaths. In several states, the legislature maintains more than superficial controls. In 10 states, there is some sharing of certification authority with other state officials or agencies, but these provisions are of minor importance: California (county boards of education, and health and welfare agency); Delaware (City of Wilmington); Illinois (City of Chicago); Kansas (education graduates—B.S.E. degree—of three colleges entitled to a first certificate); Missouri (five state colleges and two universities empowered to grant life certificates to teacher education graduates, and county superintendents to issue third-grade certificates); New York (Cities of Buffalo and New York); Oregon (City of Portland); Pennsylvania (county superintendents may issue limited emergency certificates); Maryland (City of Baltimore); and Washington (accredited public colleges and universities authorized to issue first certificate to graduates, but these must be signed by the state superintendent of public instruction).

Additional References: Chaltas (1965); Pettit (1964); Reisert (1966); Simandle (1965); Stone (1964).

Advisory Certification Bodies

In efforts to decentralize, in a sense, and to democratize the teacher education-certification process, state departments of education began establishing voluntary or extralegal advisory bodies, consisting of representatives of the several segments of the organized teaching profession. Stinnett

(in press) reported that all states but Missouri, the District of Columbia, and Puerto Rico have such bodies. Typically, these advisory groups are created by action of the state board of education and are appointed by the state commissioner of education. In nine states, however, these advisory bodies are created by law: California, Colorado, Florida, and Kentucky—two bodies, one created by law: Indiana, New Hampshire, New Jersey, Oregon, and Texas—a commission consisting of members of the state board of education, created by law. Typically, the bodies are called advisory councils, committees, or commissions on teacher education and certification. There are several variations in nomenclature and structure. The state TEPS commission serves as the advisory body in Maryland, Vermont, Wisconsin, and Wyoming.

Additional References: Beggs (1965); NEA, TEPS (1967); Peterson (1964).

Number, Types, and Accreditation of Teacher Education Institutions

A total of 1,198 colleges and universities are engaged in teacher education in 1967, with 13 states reporting a gain in the number of institutions and 5 states reporting decreases (Stinnett, in press). Among the 1,198 institutions are 20 teachers colleges (9 public and 11 private), 299 universities (116 public and 153 private), 207 public general (or state) colleges, 601 private liberal arts colleges, 19 technical schools, 39 junior colleges, and 13 unclassified schools or colleges. The number of institutions per state rank from 1 (in Alaska, Nevada, and Wyoming) to 87 (in New York).

A notable fact is the disappearance of the single-purpose teacher education institution. In 1967, only nine state teachers colleges remain (in Arkansas, District of Columbia, Illinois, Kansas, Missouri, and North Carolina). A decade ago, Armstrong and Stinnett (1957) reported that there were 126 teachers colleges (113 public and 13 private). Clearly, teacher education has become an integral part of the mainstream of higher education. Of the 1,198 institutions, 1,062 hold regional accreditation, and 419 are accredited by NCATE. The NEA Research Division (1965) reported that NCATE-accredited institutions in 1964 produced 73.8 percent of the total of the new supply of teachers in that year.

Additional References: Beggs (1964, 1965); Denemark (1965); Johnson (1965); Mayor (1965).

Use of Examinations

A total of 18 states use either national or local examinations in some aspects of certification (Stinnett, in press). The District of Columbia, Florida, North Carolina, and South Carolina use the *National Teacher*

Examinations (NTE) as prerequisites to certification. Texas and West Virginia require all senior teacher education students to take the *NTE*. but the results are used only for institutional study. Colorado and Georgia use the *NTE* to qualify candidates for one certificate. Nine states (California, Connecticut, Delaware, District of Columbia, Maine, New York, Pennsylvania, Vermont, and Wyoming) accept proficiency examinations—mostly the Modern Language Association tests in foreign languages—as substitutes for course credit from unaccredited institutions or as qualifications for an additional teaching field.

Kurland (1963) described the program of the New York State Education Department in the extensive use of proficiency examinations for certification purposes. His thesis was that such examinations will find growing use in colleges and universities and that they should be used widely in certification procedures.

Additional Reference: Boozer (1965).

Criticisms of Certification

The Conant Reports

Conant (1961) and Koerner (1963) were highly critical of teacher education in that it places too much stress on teaching method and too little on academic content. Both excoriated certification standards for their overemphasis on education courses and their lack of emphasis on scholarship. Both cautioned against a precipitate movement toward requiring five years of preparation for teachers. Conant indicted certification prescriptions as too numerous and detailed and called for simplification of the requirements and abolition of multiple certificates. He termed such specificity as a "bankrupt process" and the practice of issuing emergency certificates in huge numbers as a "national scandal."

Such criticisms have been voiced by many teachers as well. For example, Melaro (1966) recounted her efforts to move from one state to another, and then to another: she was blocked by technicalities in both instances, although she held a permanent certificate in one state based on a master's degree and had eight years of teaching experience. She gave up finally and entered into college teaching.

At another point Conant (1964) characterized the approved program approach, in use at that time in one form or another in about 40 states, as the "prescribed-exposure approach" and little different from the course-counting method, in which specific courses are prescribed by the state: he held that making up course prescriptions should be left to the college or university faculty. Although conceding that efforts to achieve the approved program approach were intended to provide greater flexibility and greater responsiveness, he asserted that existing programs do not achieve

teachers as first or second class citizens according to their teaching specialty; (b) applying the provisions to out-of-state graduates; (c) increasing the already serious elementary teacher shortage, especially by diminishing the out-of-state supply and by decreasing enrollments in elementary education in state institutions; and (d) influencing potential elementary teachers to shift to preparation for secondary school teaching because of the requirement of five years and an academic major. An act seeking to mitigate some of the effects of the Fisher Act effectively destroyed the master of arts in teaching program of California universities as a result of curriculum making by law rather than by university faculties.

Almost immediately after the Fisher Act became effective, the State Board of Education, yielding to pressure, began to revise requirements, making 81 revisions over a period of one year, until the process of certification became more complex and unwieldy than it had been before the Fisher Act. The Rodda Act of 1965 in effect restored minimum certification requirements to four years of preparation, and public colleges and universities were directed to offer undergraduate courses in education to meet state requirements. Alarmed over the deteriorating situation, Corey (1966) appeared before the Board to protest any further lowering of standards, pointing out that in 1925 California became the first state to require five years of preparation for high school teachers.

Observable Trends

Among several trends in state certification requirements are these:

1. Efforts to refine the structure and processes of NCATE to meet the criticisms arising in part from the Carleton College and University of Wisconsin cases. Mayor and Swartz (1965) made a comprehensive study of these controversies and reported that accreditation in higher education, like governmental regulation, was forced upon society by undesirable conditions resulting from a policy of *laissez faire* and that NCATE has gone through an evolutionary process that has improved its effectiveness and considerably increased the flexibility of the certification process. The import of this report is apparently to reject Conant's (1964) summary dismissal of NCATE as unworkable and ineffective.

At the behest of the National Commission on Accrediting, NCATE has gone through three major reorganizations (1954-56, 1960-61, and 1965-66). As reported by AACTE (1966), NCATE has adopted a new constitution providing for a majority representation of higher education institutions in the 22-member body. A Coordinating Board was established to supervise the budget of NCATE and review the policies and procedures of the Council. Responsibility for evaluating standards and the development of new standards was vested in AACTE, and annual meetings will be held to provide an opportunity for representatives of accredited and

interested institutions to critically discuss problems in the accreditation of teacher education.

2. The steady diminution in the number of separately named certificates issued by the states. Stinnett (in press) reported the number of such certificates as 519, as contrasted with 618 in 1957 and about 1,000 in 1919.

3. The strengthening of the processes of state accreditation (or approval) of teacher education programs.

4. The emergence of professional practices acts in states. Armstrong and Stinnett (1964) reported such acts in two states, and Stinnett (in press) reported such acts in six states and the seeking of acts by several additional states in 1967 sessions of their legislatures.

5. The drive for workable procedures toward nationwide reciprocity in teacher certification.

6. The granting of greater autonomy to institutions in developing teacher education programs. This trend is indicated by the approved program approach, with the assistance of NCATE and of strengthened state accrediting processes.

7. Greater use of national examinations in teacher education programs, in certification after self-study, and in measurement of prerequisites to certification.

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CHAPTER IV

Teacher Supply and Demand

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The research on teacher supply and demand during the years from 1962 through 1966 was largely descriptive in nature. The major sources of data continued to be the publications of the National Education Association, Research Division.* Publications containing observations and proposals relative to the topic as well as reports of research studies were found in journal articles and in doctor's theses. The conclusions of these studies were generally complementary rather than contradictory.

The literature selected for this chapter was limited to sources that appeared to have national implications for kindergarten through grade 12. For example, it was not possible to include a number of publications that were concerned with teacher supply and demand in the individual states throughout the nation. Space limitation did not permit coverage of teacher supply and demand in the rapidly developing community college movement. A further limitation was the exclusion of references that dealt in part with teacher certification, a topic to be discussed in a separate chapter.

The review has been organized according to (a) background data, (b) sources of teacher supply and demand, (c) factors affecting teacher supply and demand, (d) recent innovations and proposals, and (e) needed research.

Background Data

As was the case when Stone (1963) reviewed the literature, the supply of qualified teachers for the nation's public schools continued to be the foremost problem in public education in 1966. The NEA Research Division (1966b) estimated a total of 1,759,236 classroom teachers for the 1966-67 school year. This figure represented a 3.7 percent gain over 1965-66 and a 17.7 percent increase in the total classroom teaching staff since 1956-57. The Division's estimate of the increase in the number of classroom teachers since 1956-57 was based on a combination of U.S. Office of Education figures and its own computations.

The NEA Research Division (1966e) used an adjusted trend criterion to account for the influence of the Elementary and Secondary Education Act of 1965 and estimated a shortage of 232,384 classroom teachers for 1966-67. It calculated that approximately 364,503 new teachers were needed

*References to the National Education Association, Research Division are mentioned as "NEA Research Division" or as "the Division" in this chapter.

to attain minimum levels of quality according to selected staffing characteristics. This shortage existed in the face of a total cumulative enrollment estimated by the Division (1966b) as 11,593,856 pupils in grades K-12 for the 1966-67 school year. This estimate was an increase of 2.3 percent over 1965-66 and an increase of 38.2 percent over 1956-57. Although the percent of classroom teachers increased at a greater rate than the enrollment for the same period of time, the Division and *Phi Delta Kappan* (1966) called attention to the *acute* shortage of qualified elementary school teachers. Furthermore, the Division (1966c, e) stated that all of the 44 states having sufficient information to make a valid appraisal of the 1966-67 situation reported a greater teacher demand at all levels than that of the previous fall.

Sources of Teacher Supply and Demand

The NEA Research Division (1966e) identified the major sources of teacher supply as (a) bachelor's degree graduates in 1966 who were ready for employment for the 1966-67 year, (b) qualified former teachers, (c) teacher education graduates having postponed entry into teaching, and (d) persons with bachelor's degrees and necessary personal characteristics but no professional education preparation. Only in source (a) could the Division provide precise numbers of available new teachers since in the remaining sources only estimates were possible.

During the period 1962-65, the NEA Research Division (1962, 1963c, 1964b, 1965b) described five categories of demand: (a) replacements for persons leaving teaching, (b) increased enrollments, (c) overcrowding and part-time sessions, (d) additional instruction and services, and (e) replacements for the unprepared. Beginning in 1966, the Division (1966e) used three estimates, each based on specific criteria, for demand. The categories of demand were reclassified in order to accommodate the change in the report's structure. One estimate based the demand for teachers on the attainment of minimum levels of quality in staffing; the second based the demand for teachers on staffing trends of recent years; and the third was based on an adjustment of the second to assess the expected impact of the Elementary and Secondary Education Act of 1965. The report also estimated the demand for beginning teachers as a subgroup of new teachers. The Division cautioned users of the report to interpret the estimates only in general terms since additional study would be required on different variables affecting the data.

Factors Affecting Teacher Supply and Demand

Numerous factors affected the supply and demand of teachers. Four that appeared to be important to researchers during 1962-66 are reviewed here.

Teacher Education Graduates

Viewed historically, the percent of college graduates who completed teacher education programs has increased substantially. According to the NEA Research Division (1966e), in 1950 only 26.7 percent of the total graduates completed teacher education programs. Between September 1, 1965, and August 31, 1966, a record total of 200,919 persons completed teacher education programs, representing an estimated 38.2 percent of the total class of 1966.

A recurring problem has been the imbalance of persons prepared to teach on the secondary compared to the elementary level. The NEA Research Division (1965a) referred to the "selective shortage of teachers" and pointed to the necessity for more attention to the distribution of the new supply according to specific needs. The Division predicted that unless the proportion of persons preparing for elementary school teaching changed, a considerable oversupply of secondary school teachers would exist in the midst of a continuing shortage of elementary school teachers.

Bartels (1961, 1966) called attention to the imbalance in supply and demand according to grade levels. He prepared an index of teacher *percentage of demand to supply*. Demand was determined by the number of new teachers employed, and supply by the number of new teachers prepared during the period. Coverage included 22 states and the District of Columbia in 1963, increasing to 27 states plus the District of Columbia in 1964. In 1963, the high school index was 85, the elementary school 139. The following year the index was 76 for the high school and 142 for the elementary school. Bartels contended that in cases where the index was greater than 100, teachers employed were recruited from sources other than newly prepared teacher education graduates. His findings supported the recurring observations made by the Division during 1962-64 relative to the imbalance of supply and demand on the elementary and secondary school levels.

The NEA Research Division (1966e), however, presented an adjusted trend criterion estimate for 1966-67 indicating that the demand for high school teachers had increased appreciably as a result of new conditions. What effect this development will have with respect to the previously observed imbalance remains to be seen.

A significant note contained in the report of the NEA Research Division (1966e) was the fact that the number of persons who prepared for elementary school teaching in 1966 was 1.9 percent less than the number for 1965, with the net change for the high school level a gain of 10.8 percent. Also, the Division reported that the overall changes in the supply of prospective teachers graduated from state institutions in 1966 were not very large compared to 1965 data. The range of productivity of state institutions was within plus or minus 10 percent of the previous year, but there were notable exceptions. California had a decrease of nearly 3,000

prospective elementary school teachers—a 41 percent drop from 1965. Stone (1966) attributed the decrease in California to (a) a movement from a four- to a five-year standard for elementary school teachers, and (b) the requirement of an academic major for elementary education candidates that may have impelled many prospective teachers toward secondary education because of a relatively easier path to certification. Maul (1965) had speculated that such a development might be expected to accompany a movement to require academic majors of elementary school teachers.

Additional Reference: Mason (1963).

Teacher Withdrawals

The influence of teacher turnover on supply and demand must not be underestimated. The NEA Research Division (1966e) assumed that roughly 8 percent of the classroom teachers at the beginning of a school session would leave the profession before the start of the following session. The estimated numbers needed to fill positions created by an 8 percent turnover from fall 1965 to fall 1966 were 76,683 elementary and 59,283 secondary school teachers.

Several studies used questionnaires to analyze teacher withdrawals. Blaser (1965) attempted to discover reasons why 70 men who had entered teaching had later dropped out. The respondents placed economic factors above all reasons. W. E. Stewart (1963) found that among respondents who were experienced teachers, withdrawal was most influenced by such factors as retirement, family-related factors for women, and economic factors for men. Metz (1962) analyzed 3,843 responses from a group of 4,000 teachers and concluded that the majority of men quit teaching because of low salaries, and women left for homemaking responsibilities. Thomas (1964) used three questionnaire forms to identify factors tending to contribute to teacher turnover. One set was sent to personnel administrators in suburban school districts. A high return of responses from this group indicated that retention could be increased by raising salaries, lowering pupil-teacher ratios, obtaining additional classroom help, and placing teachers in their major teaching fields or preferred grade levels.

The accumulation of numbers of teachers who withdraw yearly from the profession suggested a potential "teacher reserve" to help alleviate the teacher shortage. The NEA Research Division (1964c, 1966e) analyzed the teaching reserve as a possible source of supply, utilizing data included in the Bureau of the Census Report of 1960. According to the census report, the size of the teaching reserve was 28 percent as large as the total number of teachers employed that year. Included were persons who were not employed in 1960 but who had been last employed as teachers at some time within the preceding 10-year period. Persons who had been employed in both public and private schools were included. The census study was based on a 5 percent sample of the total U.S. population. The data were further limited to the extent that occupational definitions

in the census varied somewhat from the usual educational statistics. The report, therefore, had to be considered a very general estimate. The Division (1966e) analyzed the 1960 census report in terms of 1966 conditions and estimated that the reserve had increased from 301,160 in 1960 to about 360,000 persons in 1966. The report concluded, however, that increased employment opportunities may have reduced the number of persons in the reserve to a minimum level.

Salaries and Working Conditions

The NEA Research Division (1966e) concluded that, during 1955-65, less than 75 percent of eligible graduates entered teaching immediately following completion of their training. The importance of salary and good working conditions as attractions of teaching was recognized by Etters (1965), Richards (1961), and Strickland (1962). Etters investigated the staffing characteristics of 139 school districts in Iowa, using 10 teacher dependent variables and 24 local district characteristics that served as independent variables. The author found that all of the teacher variables were significantly influenced by several of the district variables. Salary was one of the teacher variables most widely influenced. Among the conclusions were (a) that salary inducements were extremely important in attracting teachers, and (b) that urban districts were more successful than districts in rural areas in competing for the more highly trained candidates.

Richards analyzed responses from questionnaires returned by teachers in a selected group of schools in Nebraska. Every item in the compensation category of the questionnaire was checked "unsatisfactory" by the respondents. On the other hand, Strickland, in a 78 percent return of questionnaires distributed to white teachers in selected administrative units in North Carolina, found that the 10 most significant factors tending to raise teacher morale were items pertaining to the quality of the school. Salary was not included in this category but ranked seventh place among the 10 most significant factors tending to lower teacher morale.

The importance of salary reflected in the studies by Etters, Richards, and, to some extent, Strickland was not surprising since none of the 3 states involved in these studies was ranked among the top 25 states in average salaries of public school classroom teachers as estimated by the NEA Research Division (1966d).

An imbalance continued to exist in the average salaries of elementary and secondary school teachers. The NEA Research Division (1963a) reported that during 1950-63 the average salary of elementary school teachers had increased at the rate of 98 percent, with a 75 percent increase for teachers on the secondary level. Although the salary differential between the two levels has tended to decrease, the Division (1966a, b) estimated that average salaries of elementary school teachers were lower than those of secondary school teachers. The Division (1966b) estimated the

average salary during 1966-67 at \$6,609 for elementary school teachers and \$7,095 for secondary school teachers. By 1966-67, the average salary of elementary school teachers had increased to 93.2 percent of the salary estimated for secondary school teachers.

The NEA Research Division (1966e) reported considerable variations in the holding power of the various states as measured by the percent of graduates entering positions outside the state in which they were prepared. On the elementary school level, the range for 1966 extended from 2.6 percent in California to 50 percent in the District of Columbia; on the high school level, the percent varied from 2 percent in California to 37.7 percent in Tennessee.

Additional References: Laird and Schilson (1964); White (1966).

Subject Areas and Grade Levels

On the secondary level, the literature reflected a concern for the imbalance of supply and demand relative to subject matter areas. Bartels (1964) presented an index of demand for 1951-63. The 1963 index ranked 21 teaching fields according to demand. Library science, general science, elementary education, mathematics, English, foreign languages, and chemistry were ranked in the top third. The lowest third in demand included art, agriculture, biology, men's physical education, physics, journalism, and speech. The index prepared by Bartels (1966) for 1964 reflected an increased demand in general science, elementary education, mathematics, industrial arts, art, agriculture, and physics. He concluded that if special education had been included it would likely have been first on the list. The 1964 index identified speech, men's physical education, biology, and social studies as areas characterized by a gross oversupply.

A prediction that a critical *selective* shortage in high school could continue in the presence of a *gross* oversupply was made by the NEA Research Division (1964a). This possibility continued to develop the following year, with the Division (1965a) referring to a "selective shortage" of teachers. The Division (1965b) reported that the lack of balance in the distribution of the new supply of elementary and secondary school teachers was the most critical factor in the teacher shortage. In a special survey in the fall of 1966, the Division (1966e) found teacher shortages in all subjects except art, speech, social studies, and men's physical education. Many of the areas reflected an increased shortage over earlier estimates for the 1966-67 school year. A change over previous years was discernible in the high school situation in the increased demands for teachers on this level resulting largely from the Elementary and Secondary Education Act of 1965. A selective shortage of teachers continued, however, to exist.

In another vein the literature reflected concern about the supply of persons qualified to teach on the junior high school level. Additional references on this topic are listed at the end of this section.

Research on supply and demand in elementary education disclosed a variety of interests among investigators. Bradley (1965), Bradley and Earp (1966), and Peterson (1966) studied various aspects of the supply of male teachers. Bradley surveyed 12 public school districts in Missouri to ascertain the number of male teachers whom superintendents would hire if enough qualified males were available for the 1965-66 school year. Admitting a limited sampling, the author concluded that the total number of men completing elementary education requirements in Missouri's teacher training institutions in 1965 could be assimilated by only seven large districts in that state. Bradley and Earp surveyed superintendents of public school districts in Texas in 1964-65. Using a stratified random sample, the authors received a 70.3 percent return from 133 questionnaires. The superintendents' responses indicated that they would need almost five times the number of qualified men for staffing purposes in 1966-67 who were graduated from Texas institutions in 1965.

Peterson (1966) sent questionnaires to 114 elementary school administrators and 156 male teachers. He concluded that there were several reasons why men did not enter elementary education. Among these reasons were poor financial remuneration and the lack of male associates in school buildings. He concluded that the situation could be improved by increasing salaries for men and by increasing publicity on the role of men in elementary school teaching.

Southworth (1962) explored the differences in values and other characteristics between elementary teaching majors stating a preference for primary grades and those preferring intermediate grades. Seven personality characteristics were found to differ between the two groups. The author concluded that to the degree the personality-related characteristics were relevant to the competencies necessary for success at a given grade level, these characteristics could be used as predictors of the individual's suitability for teaching at that level. Southworth contended that the data were useful in the employment of elementary school teachers.

The NEA Research Division (1964a) asserted that the greatest need of public schools was a much larger supply of teachers qualified to meet the educational needs of young children in self-contained classrooms. The Division emphasized the importance of recognizing the continuing need for elementary school teachers in the face of expanding high school enrollments. Maul (1965) supported the contention that the elementary shortage would continue. On the other hand, M. Stewart (1964), using data based on a manpower study completed by the Bureau of Labor Statistics, asserted that the teacher supply situation in elementary education would improve substantially by 1975. She concluded that the number of secondary school teachers in 1975 would be sufficient not only to cover the demands on that level in most subjects but to help staff elementary schools as well. An opposing point of view was stated in the report of the NEA Research Division (1965a). The critical shortage of elementary

teachers reported by the Division (1966c, e) suggested that new factors were affecting the situation since Stewart's projection.

The NEA Research Division (1963b) concluded that headway was being made in the attempt to raise standards for elementary school teachers in the midst of continuing enrollment increases. The Division (1964b) stressed, however, that much improvement was necessary in the attempt to raise standards for elementary school teachers. Wide variability was reported among the various states in elementary school teaching requirements.

Additional References: Dixon (1965); Hemenway (1963); Jung (1963); Kerr (1963); Vars (1965).

Recent Innovations and Proposals

The literature during 1964-66 reflected a preoccupation with new pressures on teacher supply and demand. Despite the fact that these new pressures compounded the problem of an already existing shortage of teachers, many investigators stressed the importance of maintaining standards in efforts to alleviate the crisis.

The NEA Research Division (1966e), using U.S. Office of Education projections, estimated that 50,000 additional new teachers would be needed for 1966-67 as a result of the Elementary and Secondary Education Act of 1965. The Division anticipated that 60 percent of these would be placed in elementary schools. Maul (1966) asserted that the chronic teacher shortage on the elementary level required careful analysis with respect to new factors. He stated that (a) Public Law 89-10, if pushed vigorously, could create a demand for tens of thousands of teachers with specialized talents that have been scarcely recognized heretofore; and (b) the number of children included in the provisions of Public Law 89-10 who were not receiving any public school attention exceeded 5 million.

School Life (1964) cited the need for properly trained teachers to work with over 5 million handicapped children. The author concluded that (a) schools needed about 200,000 special educators whereas only 50,000 to 60,000 were available in 1963, and (b) the greatest problem encountered in providing education for these children was the lack of properly trained teachers.

The NEA-AASA Educational Policies Commission (1966) stated that the opportunity for early childhood education at public expense should be universal and should begin at the age of 4. Maul (1966) speculated that the inclusion of all 5-year-olds would create an immediate demand for over 50,000 additional teachers qualified to teach this age level. He stressed the need for a new framework of steps to seek out and encourage prospective teachers for this service.

M. Stewart (1964) stressed that the teacher-pupil ratio in the years ahead must be taken into account in predicting supply and demand requirements. She stated that such current trends as urbanization may tend

to increase the ratio by eliminating some rural schools with smaller enrollments. Also, curriculum developments involving team teaching, advanced classes, television, and teaching assistants may affect trends in the teacher-pupil ratio.

The increasing utilization of nonprofessionals as auxiliary teachers prompted the Washington Education Association (1966) to issue a position paper calling upon local associations to develop guidelines for the employment, assignment, and organizational relationships of such persons. Esbensen (1966) admitted a concern for the possibility that noncertificated personnel might encroach upon the prerogatives of regular teachers. He emphasized, however, that many useful teaching services could be performed under the *direction* of qualified teachers. Schmitthausler (1966) analyzed four elementary school programs that utilized noncertificated classroom teacher assistants. The research was conducted via classroom observations and interviews. He concluded that although regular teachers noted a rise in classroom productivity resulting from the noncertificated help, most teachers stated a preference for lower pupil-teacher ratios to classroom helpers as a means of increasing productivity. The NEA National Commission on Teacher Education and Professional Standards (1967) issued a statement on *Auxiliary School Personnel*, in which such staff were seen as "one of the most challenging and hopeful advances in modern education" (p. 18).

Ford and Allen (1966) described the misassignment of teachers as a serious problem resulting from the teacher shortage. The authors adapted their presentation from a special survey conducted by the NEA National Commission on Teacher Education and Professional Standards (1965).

Proposals to ease the teacher shortage through the use of qualified personnel were advocated by the NEA National Commission on Teacher Education and Professional Standards (1966) and *School and Society* (1965). Both sources recommended that returning Peace Corps teachers should be employed. The TEPS Commission warned against employing unqualified teachers, since the practice would tend to drive intelligent and talented persons away from the profession. Ladd and Laycock (1965) queried the chief public school officials in each of the 50 states on provisions made for loans and scholarships by state departments of education. The authors recommended a much wider distribution of loans and scholarships as a critical necessity in providing trained manpower for the classroom and the general society.

Needed Research

For the profession to obtain a sharper focus on the problem of teacher supply and demand, additional studies should (a) ascertain conditions that influence teacher education graduates not to enter the profession; (b)

ascertain the factors that influence prospective teachers in the choice of location for assignment; (c) determine the characteristics that are significant predictors of success and persistence in different subject areas and grade levels; (d) evaluate the influence of various staff utilization plans, use of auxiliary personnel, and curricular innovations on teacher supply and demand; and (e) assess the nature of the misassignment of teachers. As Stone (1963) noted, there is continued need for improved methods of locating teachers and keeping in touch with them over a period of years. The inability to predict supply and demand on a long-term basis suggests the need for research designs in which variables can be programed and estimates can be expressed as statistical probabilities. The data derived from such studies would be extremely useful in counseling high school and college students who plan to enter the teaching profession.

In the final analysis, most research efforts have failed to examine the problem of teacher supply and demand in the context of the social, philosophical, and political aspirations of our society. Until this examination is made, the research will continue to deal only with fragments of the problem.

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CHAPTER V

Employment Practices and Working Conditions

CHARLES S. BENSON AND LESTER A. DUNN

Recent writings on the topic of employment practices and working conditions have revolved around one central new development in American education: collective negotiations between school boards and teachers' organizations. In the past, working conditions that had system-wide application were established, in the main, by fiat. It was thus appropriate that school boards and central office administrators be instructed about the "principles" of personnel administration, to the ends that recruitment to the profession of teaching be adequate for the staffing needs of local districts and that good morale be maintained among employed teachers. As state legislators adopt laws requiring or authorizing negotiations and as teachers' organizations compete for members, academic interests inevitably shift from the delineation of guides to good practice in personnel affairs to the environment of decision making. New and ticklish problems are being faced, and this makes for exciting reading.

Common Problems of Personnel Practices

All school districts face periodic needs to hire new professional employees. Steffensen (1963) stressed the importance of quality of recruitment and recommended the use of a thorough interview, testing, and observation of performance as screening procedures. He further indicated that, once a teacher is hired, formal evaluation of the teacher should have a positive orientation, assuming that professional performance of a high standard may require administrative assistance in removing obstacles to successful performance. As highly important as individual judgment of professional growth may be, such judgment need not be disassociated from the operational objectives of the school and district. Recruitment and selection of personnel were also discussed extensively by Castetter (1962), Fawcett (1964), and the NEA Commission on Professional Rights and Responsibilities (1963).

Miller (1965) expressed concern about the effect on teacher recruitment of undue emphasis on material benefits and security. He suggested that the psychic rewards of socially significant service could be the basis for drawing superior recruits to teaching. The analogy, of course, is to the relative attractiveness of the Peace Corps. On the other hand, Morse (1966) called attention to the need to provide the teacher amply with tools of the trade and to have a generous enough budget to relieve him of non-

professional duties. The commitment of teachers to perform a socially significant service can also be blunted by authoritarian and paternalistic attitudes of school administrators (Reuter, 1963). Boy and Pine (1963), pointing to lack of clarity of role as the underlying problem, suggested that clearly defined professional roles for teachers and other staff members would result in more time for teaching, more effective approaches to educational improvement, and reduced conflict. Lee (1966) concluded that the movement from the "whole child" concept to the "student" concept of education is producing a more modest and manageable conception of the teacher's function.

The general absence of the "merit principle," as distinct from merit pay, is also a disturbing feature in some school districts (Steffensen, 1962). Some general dissatisfaction with evaluation and its relation to professional development has been indicated by the NEA Research Division (1965).

Bossone (1963) related the blurred quality of the definition of the teacher's role and image to the problems of teacher effectiveness and turnover. The failure of at least the teacher training institutions and the administrators, if not the public, to agree on the teacher's role and image appears to affect seriously the beginning teacher's commitment to education. White (1966) noted the effect of negative pupil attitudes on turnover of beginning teachers and suggested that socioeconomic differences are important in making assignments of beginning teachers. Nelson and Thompson (1963) reviewed the research in this area and listed 19 factors affecting turnover; this list emphasized money, discriminatory loads on new teachers, extra-duty assignments, and inadequate supervision. Bienenstok (1961), *School and Society* (1964), and Taylor (1965) offered suggestions for attacking the problems of low morale and high turnover, while Geer (1966) cautioned that commitment to teaching is so closely fitted to the occupational structure that changes in it would necessarily involve structural changes in teaching as a profession.

Nelson and Linton (1966) were concerned with the impact of educational television on personnel management, noting the threat of a two-class society of teachers—those in the classroom and those in the television studio—with different working conditions and a likelihood of unrest.

Low (1965) found evidence that organizational membership is correlated with teacher perception of working conditions, noting that the National Education Association (NEA) attracts more women and elementary teachers, while men tend to be unaffiliated or, if they join at all, to join the American Federation of Teachers (AFT). AFT members were more likely to join discipline-related teacher groups and assess morale at a lower level, while NEA members had a more positive attitude toward administrators. He found no significant differences among the various groups in tenure, personal teaching objectives, experience, or community participation in this one-district study. Grievances centered on nonin-

structional tasks, low status, lack of involvement in the decisions process, and working conditions in the instructional program.

The Shift to Collective Negotiation

As of 1964, Betchkal could report that teachers were struggling for higher salaries, reduction of class size, duty-free lunch periods, relief from other nonprofessional chores, fringe benefits, and grievance procedures. Presently, the list of teacher concerns must be expanded to include curriculum revision, in-service education, leaves of absence, teaching assignments, transfers and promotions, discharge and discipline of teachers, and provision of physical facilities in the district. When the list of teacher concerns is thus broadened, it is apparent that some teachers now define "working conditions" to include the most fundamental matters of policy decision in a school district. Wildman (1964) stated that there is in his opinion no useful industrial analogue for the teachers' interest in sharing policy powers with the administration. Whereas the theory and the practice of collective bargaining are based on the assumption of significant and continuing conflict between the managers and the managed (Wildman and Perry, 1966), it should be quickly stated that collective bargaining represents a creative challenge to administration. It does not imply a less satisfying or important role for administrators in the future. Rather, administrators have an obligation to retain a measure of control over the bargaining process, and as they do so their functional potential and status may actually be enhanced.

One can ask, naturally enough, why the determination of employment practices and working conditions has shifted into the arena of collective negotiation. Taylor (1966) indicated his belief that the traditional organizational structure, i.e., the board-administrator-teacher relationship, has become poorly adapted to public interests, these interests themselves being diverse and conflicting. Hence, the public has been reluctant to respond to the old argument that "nothing is wrong that more money won't cure." Collective negotiation is then the means that teachers use to get the public to change its mind about the necessary costs of education. Nolte (1965) took a somewhat different point of view. He stated that the rising militancy of teachers is a response to pressures from the public, pressures that take the form of a hue and cry over educational deficiencies. Teachers are called on to solve many problems that they lack the power and financial means to deal with (e.g., integration, pupil failure, and the general disintegration of the social fabric). In their frustration they have turned to direct action. Further, teachers in large districts tend to feel "left out" and depersonalized as a result of lengthening communication lines to the locus of power in the central office. In this respect, Moeller (1964) found that the teacher's sense of power to influence district policy formation varied

with the degree of bureaucratization of the administration. Strongly bureaucratic systems, characterized by highly predictable administrative behavior patterns and methods of handling issues and by relatively fixed communications channels, enhanced the teacher's sense of power by permitting him to exert his influence selectively. On the other hand, weak bureaucratic systems, i.e., "democratic systems," were found to be so accessible to all elements of the community that problem-solving procedures tended to be unpredictable, leaving the teacher with a sense of reduced influence and power. Moeller also defined a set of power factors governing the individual teacher's variance from the general level of "sense of power."

Not all writers welcome the determination of personnel practices by means of collective negotiation. Van Zwoll (1964) expressed dislike for the implied threat in collective bargaining and uneasiness about the fragmentation of school employees into separate bargaining units. And behind any general concern with the new relationship looms the question of what happens when teachers and board arrive at an impasse. It has recently been assumed that the most common procedure used to resolve labor-management impasses, namely, the strike, is illegal for teachers. However, when Keppel (*Nation's Schools*, 1965) urged teachers to use the strike "only as a last resort," the inference was drawn that the then Commissioner of Education had recognized the right of teachers to use work stoppages to resolve impasses. Rich (1963) indicated that a teachers' strike may be designed to correct moral injustices embodied in the legal system and hence may be morally justifiable.

As Moskow (1965) pointed out, the scope of negotiations will vary from district to district. Barstow (1966) called attention to the fact that the Connecticut Public Act No. 208 of 1965, dealing with teachers' organizations, requires school boards to negotiate, and to negotiate on "salaries and all other conditions of employment." Now, if teachers choose to place their bargaining efforts on salaries, fringe benefits, and the like, they are criticized for giving their financial welfare priority over educational improvement. Cherry (1963) contended that the teachers' drive for professional negotiation was really a concern for teacher welfare more than a concern for the needs of children. However, when the teachers' organizations bargain about such educational issues as class size, curriculum revision, and special provision for schools in disadvantaged areas, they are said to be entering upon policy and budgetary areas that best lie within the purview of the board and administrator (Gross, 1964). Moreover, the existence of a detailed agreement, even when it is confined to working conditions narrowly defined, can erode the leadership position of building principals, burdening these persons with the initial hearing of complaints about interpretations of the agreement and considerably reducing the scope of the principal's autonomy vis-à-vis his teachers. Finally, it must be recognized that much policy making about the internal

allocation of resources in school districts, especially policy making in the larger districts, is moving into the purview of the state and federal governments. By and large, both NEA and AFT are now relatively weak in influencing decisions about education at these levels of government (Lieberman, 1965).

The picture, however, is not all dark. Cogen (1966) held that unionism and militancy correlate highly with professionalism. Corwin (1965) agreed, noting that the militant teacher is also relatively more conflict-prone and that the conflict is as much a product of what people are against (employee status) as what they are for. He found that the militant informal leaders generally arise outside the established professional organizations and labeled this type of teacher the "functional bureaucrat," one of three typical roles in teaching. He termed the other roles as those of the "service bureaucrat" who is generally in the leadership of professional organizations, and the "job bureaucrat" who is typically the rank-and-file teacher. Doherty (1966) made the point that when teachers bargain about welfare, the improved working conditions that may result should have the effect of recruiting a superior quality of person to teaching and, further, that when teachers gain the power to see that they are relieved of subprofessional tasks they can then more readily concentrate on improving the educational process. Finally, Kratzmann (1961) showed clearly that in the Canadian experience, unionism and professionalism can exist side by side in the field of education.

The Issue of Delegation

When employment practices and working conditions come to be determined through collective negotiations, serious questions arise about the determination and delegation of board prerogatives. For one thing, boards in the past have generally chosen to keep close control over information in general and statistical data in particular. However, labor law holds that refusal to supply necessary data in an area subject to bargaining is evidence of lack of good faith (Seitz, 1966). A more serious problem exists in the condition of impasse. Shall the dispute over the drawing of a contract be subject to binding arbitration or does this procedure represent an illegal delegation of board authority to a nonelected body? The philosophical and practical issues on this point were dealt with thoroughly by Lieberman and Moskow (1966). The position of the American Association of School Administrators (1966) is against binding arbitration, though mediation and fact finding by a body having some responsibility for public education in the state is acceptable. Garber (1965) has taken a position in favor of voluntary arbitration. Becker (1966), however, has indicated that teachers may exploit the nonbinding form of arbitration by deliberately exaggerating their claims in the hope that the

arbitrators will be led to make big awards, thus leaving the board in a somewhat defensive position.

Written agreements on working conditions are becoming more numerous (i.e., used in more districts), and these agreements are becoming lengthier (Perry and Wildman, 1966). It should be recognized that an agreement is final during its stated period of life (Cohodes, 1964). Does the board suffer an abrogation of authority simply when it signs an agreement? That is, suppose it accepts a policy on class size and during the life of the agreement decides it wishes to change the policy. Presumably the board has bargained away its right to make short-term changes in policy. In any case the agreement does imply the imposition of comprehensive and universally applicable rules upon teachers, regardless of the possibly significant differences in work orientation.

There is yet another area in which the board may be seen to delegate authority, namely, in grievance procedures. In New York City and, indeed, in many other districts, a teacher can file a grievance about excessive class size (Selden, 1964). If the grievance goes to an "outside," nonelected committee for a ruling, it might appear that the board had delegated authority about policy on class size to the committee. Yet, it is important to have smoothly working grievance procedures, especially in large cities where the constraint of fiscal dependence often prevents the board from agreeing to as good a contract as it would like to have. It is important, that is, that there exist a program to allow employees to get whatever organizational relief they can in a difficult situation (Van de Water, 1965). The procedures for establishing grievance procedures have been discussed by Stinnett, Kleinmann, and Ware (1966) and by the NEA Commission on Professional Rights and Responsibilities (1966).

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CHAPTER VI

Status of Teachers

ELIZABETH G. COHEN

Anxiety and unhappiness over the status of teachers permeate much of the research literature on the subject. Many writers feel that teachers' status should be higher than it is. When it comes to proposing *means* for improving this status, proposals differ greatly: "Teachers should act more professionally"; "Teachers should be given enlarged powers of decision making in the school"; "Teachers should be paid more"; and "There should be a program of public education on the importance of the teacher role." These proposals are not really based on the research available. Because the strength of the current research is in its ability to *describe* rather than to account for various aspects of the current status of teachers and future teachers, it is not possible to base such recommendations on research results. Information about how people feel about teachers, how much teachers earn, and where teachers have their social origin does not in and of itself tell us how these phenomena can be changed. From a purely practical point of view, descriptive work literally fails to suggest problem solutions.

To use research to conceive of ways to improve teachers' status or to answer other social policy questions relevant to teachers' status, we must ask, "What factors underlie the present status of teachers?" For example, if we want to know how to train a middle class teacher to work in a lower class school, we will have to ask, "How does the teacher's background come to influence the teaching process?" In other words, we will have to move on from the excellent descriptive work now available to the explanatory level where we formulate and test propositions about antecedent conditions and consequent status changes. Then the persons concerned with social betterment of teachers, recruitment and training of teachers, and innovations in school organization will have something more tangible in the way of research on which to base their projected solutions and programs.

The approach in this chapter is to break status into some of its many possible theoretical definitions and to report research relevant to these definitions with brief descriptions of methodology and findings. By looking at a specific type of status phenomenon, we take the first step away from the commonsense level of conceptualizing the research problem and toward a deeper understanding of its components. The next step is the critical judgment as to which avenues of research will prove most fruitful. These critical judgments of strategy are framed as suggestions for future research. Their two major characteristics are (a) a consistent aim toward the goal of explanation; (b) the idea that, when studying status *in particular*, it is

wise to use the concepts and approaches of sociologists who have studied the problem of status *in general*.

Public Evaluation of Teacher Status

She ate a little bit, and said anxiously to herself,
"Which way," holding her hand on the top of her head
to feel which way it was growing . . .

Alice in Wonderland

A good definition of status for the purpose of this section is the evaluated worth of a position involved in a hierarchical ranking. Accepting this definition, we can proceed to examine current research using people outside the profession as evaluators and people inside the profession as contributors to the researcher of their feelings about the relative goodness of their chosen career.

Viewed from the outside, the simplest and seemingly most practical research question to ask is basically Alice's question quoted above: Has there been any observable improvement or deterioration in the status of teachers in recent years? On the most general level, we can examine the relative ranking of teaching and other jobs by a sample of the country's population. Because the ranking of individuals or occupations as to their general social standing involves many different criteria arising from the multiple values of a complex society, variations in phrasing the questions will lead to different results. Variations in the comparison group given the respondent also produce differences in the relative status ranking reported for any given occupation. Groff (1962) attempted to compare the rankings of teaching as an occupation across studies made in the years 1931-58. In these studies the number of occupations used varied from 15 to 200. and the elementary and high school teachers were sometimes in separate categories and sometimes combined. The results, as one might anticipate, proved to be highly variable and essentially incomparable from study to study. Groff felt that one important source of variability was whether or not teachers were put into a category with other professionals. Obviously, if one wants to estimate change over time of the generally perceived status of an occupational group (recognizing that different respondents will use different criteria for ranking) there is no substitute for looking at an exact replication of the same study at two different points in time.

A properly qualified answer for Alice's query was provided by Hodge, Siegel, and Rossi (1966), who replicated the National Opinion Research Center's (NORC) well-known 1947 study of the prestige positions accorded to 90 occupations by a national sample of the American adult population. Because the prime purpose of this study was to estimate changes over time, the authors even went so far as to repeat the outdated quota-

sampling method. Although the overall correlation of the two sets of rankings was 0.99, the rank of the category "public school teacher" rose from 36 in 1917 to 29 in 1963: the proportion giving teaching an "excellent" rating showed a 5 percent rise between the two periods of time. Considering the general stability of the rankings and the similarities in results between studies using this ranking procedure in different countries, we can say that the generally perceived status of the occupations of public school teaching appears to have risen a few notches.

Why this slight rise in the status of teachers? No study in the past several years directly attempted to explain changes in people's perception of teachers as a consequence of changes in the makeup of the occupation and changes in teachers' income. We do have, however, several excellent surveys describing changes in income and characteristics of teachers over time. With this descriptive work at hand, we can speculate on sources of changes in public perceptions of teacher status. The NEA Research Division (1966), in an annual review of teachers' salaries, documented both an absolute gain in income status for teachers in the last decade and a gain relative to the rising income of other occupational groups. In 1951-55, 48.5 percent of all classroom teachers in elementary and secondary public schools received less than \$3,500, and only 22.3 percent were paid \$4,500 or more; in 1965-66, 90.5 percent received \$4,500 or more, and only 0.9 percent were paid less than \$3,500: in fact, 41.3 percent were receiving \$6,500 or more. The average annual salary of the instructional staff in public elementary schools increased 63.1 percent in the period between 1955-56 and 1965-66. The gain relative to other workers was shown by the fact that the average salary paid to employees in manufacturing rose only 40.2 percent during the comparable period: as a result, for the first time, in 1961, the average salary of the instructional staff exceeded the average salary for employees in manufacturing. Comparisons with other professionals with comparable years of training, however, still showed the teachers at a salary disadvantage, surpassing only librarians, social and welfare workers, clergymen, and dietitians. If this improvement in the income status of teachers has been visible to the public at large, it may help account for the improvement in the overall ranking given teaching as an occupation in the NORC list.

Somewhat more direct evidence of perceived income as a factor in the public's perception of teacher status comes from Tronsgard's study (1962) of adult attitudes toward teachers and teaching. From the point of view of future research, Tronsgard's most challenging finding (on a large questionnaire sample) was that the perceived economic discrepancy between the respondent and the teacher was an important correlate of that respondent's attitude toward teachers and teaching. The relationship was, however, far more complicated than Tronsgard originally predicted; persons who felt themselves economically equal to teachers had the most favorable attitudes. Those perceiving themselves somewhat below and somewhat

above teachers ranked next; and the least favorable levels were the two extremes. Similarly, economic discrepancy between the respondent and the teacher correlated with the factor "wanting a son to be a teacher": the group somewhat lower than the teacher was most likely to regard teaching as an economically promising profession while the group *much* lower than teachers was the group next to the least likely to want a son to be a teacher. In examining the effects of perceived income discrepancy, Tronsgard found it useful to break down attitudes toward teaching by means of a factor analysis into (a) general attitude toward teachers and the teaching professions, (b) parental ambitions for daughters, (c) the teacher stereotype, and (d) parental ambitions for sons. As soon as we begin to realize that the perceived status of teachers varies with the eye of the beholder and may be analyzed into components, various explanations for the perceived status of teachers suggest themselves: for example, a possible interpretation of the unexpectedly unfavorable opinion of very low status groups is that they have suffered a punitive, failing experience at the hands of teachers as children and may therefore have a low opinion of the whole occupation.

Future research might do well to examine further both (a) perceived income discrepancy as a variable predicting attitude toward teachers and (b) various explanations as to why certain groups singled out on the basis of their social perceptions acquire unfavorable evaluations.

Another possible explanation for the improvement in overall ranking is the remarkable change in the sex distribution of teachers in recent years. According to a special survey of teacher characteristics by the National Education Association in 1961 (NEA, 1963), the occupation of teaching has seen a great influx of younger men in recent years. The results of a two-stage national probability sample (with a response rate of nearly 95 percent) showed that the largest age group of men teachers was 26-35 years of age and that these men formed a *substantial majority of all teachers in this age group*. In contrast, for women, the largest age group was 16-55, and they represented 83.8 percent of this age group. This striking difference in age distributions between the sexes suggests that, as the sex distribution of the occupation changes, the public sees teaching as a more desirable occupation for males and concludes that the relative standing of the occupation must have improved, inasmuch as male status is generally regarded as higher than female status in our society. Probably the most important implication of this survey finding for the future researcher is that the utmost caution must be used in making comparisons of male and female teachers uncontrolled for age. Results correlated with sex may be regarded as a function of sex differences when they are more appropriately seen as a function of the fact that the female teachers are older than the male teachers.

The status of teachers as viewed by outside evaluators can also be studied through the image of teachers projected through the mass media.

The researcher must remember, however, that the image conveyed by the media may be both an effect of the actual status of teachers in a society and a potential cause of particular stereotypical notions. Gerbner (1966) presented an unusual cross-cultural comparison of the media image of teachers between 1961 and 1963 in the United States, four countries of Western Europe, five countries of Eastern Europe, and the Soviet Union. Using a method of standardized rating scales and procedures, he analyzed 1,406 media stories by comparing characteristics such as purposefulness, morality, learnedness, and goodness of teachers with the same characteristics of other adults in the same stories. Overall, as one goes from west to east, teachers appeared in a generally more favorable light; they also stood out as more differentiated from the rest of the population by their distinction in learning and their qualities of personal and social morality. A factor analysis of ratings on personality variables revealed that the U.S. media portrayed a higher proportion of women teachers on all levels of education and a composite image that was less professional, less likely to slip or advance socially, and more easily frustrated and victimized by the higher level of violence and illegality prevalent in the U.S. fictional world. The author cautioned that differences between countries in the organization of media and the purposes for which media are used undoubtedly accounted for some of these findings.

Can the media actually affect the individual's perception of the status of teachers? One possibility for research in the education of the public suggested by this cross-cultural study is an experiment in which the subject's attitude toward teachers and teaching is manipulated by means of different types of media presentations, with teachers portrayed in the different lights described in the study. Alternatively, if one wishes to view the media as an effect of status rather than a cause, we might examine U.S. media stories over time to see if we can spot the same small gain in favorability observable in the overall ranking of teaching as an occupation. *Additional References:* DeLora, Harder, and Kidwell (1964); NEA Research Division (1963, 1965); U.S. Department of Commerce (1964).

Teacher Career Satisfaction

How do the teachers themselves feel about their choice of occupation? Despite the unfavorable income and externally perceived status position of teachers compared to other professionals, three-fourths of the teachers in the survey (NEA, 1963) of teacher characteristics would "certainly" or "probably" choose teaching as a career again, given the chance to go back to their college days and start over. By far the most frequently cited source of satisfaction was the pupils. This feeling of satisfaction with career choice was higher in women than in men teachers, in elementary school teachers than in secondary school teachers, in teachers in small

districts and small schools than in teachers in larger districts and larger schools, and, finally, in teachers without degrees than in those with degrees.

At first glance, these findings are anomalous because the most satisfied groups within the profession were the subgroups who are generally regarded as having lower professional status. Social psychology provides us with an intriguing interpretation for these results: they may be a function of varying social comparison processes, i.e., one must examine carefully the occupations and groups these types of teachers compare themselves with when estimating the attractiveness of their careers. Perhaps these satisfied teachers without degrees are comparing themselves to other people without degrees *outside* the teaching occupation: they have certainly done well in comparison to such a group. Likewise, women teachers may be comparing themselves to other women in clerical or traditional female occupations. In contrast, the male teacher in the large school and large school district may regret his career choice when he compares himself to other male professionals found in these areas who have comparable years of training but are better off financially. At this stage, these are just speculative interpretations, but past work in social psychology and sociology has often demonstrated the heuristic value of concepts of social comparison.

Teacher career satisfaction has been a subject of study for some time, but the results can hardly be called cumulative. With some more abstract way to understand how people make judgments about their chosen career, as we have suggested above, there is a far greater chance of developing a set of propositions that will be general over many variations in working conditions and will thereby lead to the accumulation of more systematic knowledge.

Status Origin of Teachers

Charters (1963) pointed out that the early concern with the status origin of teachers stemmed from a perceived need to "get a better class of people into teaching." It was commonly assumed that teachers from modest, small-town backgrounds would never be able to provide the proper cultural atmosphere for the children in the classroom. In somewhat contradictory fashion, the next stage of concern with the status of the teacher's background came with the pronouncement that the school was a middle class institution where middle class teachers taught by the light of middle class value systems. The question about teachers as being largely middle class has continued into the present time with our special concern for the fate of the culturally deprived and minority group child.

Research on status origin stemming from this mixed background has been concerned with two major questions: (a) Are teachers predominantly middle class in origin or are teachers predominantly upward mobile from

lower status backgrounds? (b) How does status origin actually affect the way a teacher plays the occupational role? Charters' review discussed this issue with great clarity, and he made a plea for research on the interplay between the teacher's background characteristics and classroom situational factors as they affect actual classroom behavior. After a definitive coverage of the entire pre-1960 literature on the subject, Charters concluded that the often-held assumption that teachers' middle class standards lead to particular types of classroom behavior was virtually untested and that, if anything, the evidence indicated the strength of *situational* classroom factors as a determinant of teachers' behavior.

So far, unfortunately, Charters' plea appears to have gone unheeded. Our excellent surveys of backgrounds of teachers and of recruits into teaching have remained on the descriptive level. NEA's survey (1963) of teacher characteristics found that the teacher population contained a large proportion of individuals who are upward mobile from minor white collar or upper level blue collar backgrounds (37 percent). At the same time the proportion coming from managerial and professional backgrounds was larger than the proportion of the total labor force in these two occupational groupings. The younger teachers in the sample were not as likely to have come from a farm background as the older; this fact was felt to reflect parallel changes in the country's occupational structure over time. On the whole, it would not seem fair to characterize teachers as either of "middle class" origin or upward mobile. They spring from a rather representative cross section of the labor force with some overrepresentation of the managerial and professional groups and some underrepresentation of the lower blue collar groups.

Davis's study (1965) of 1961 college graduates choosing a career in education as compared to graduates choosing other occupations revealed that relatively low status backgrounds are still characteristic of today's new teachers and that the field of education was more of a path of upward mobility than other college-based occupations. In a large stratified random sample designed to be representative of all June 1961 graduates, Davis found that low parental socioeconomic status (SES) was persistently associated with choice of education as a career, even when other variables predictive of an educational career choice were controlled. Other major findings were that (a) education was the largest single field of occupational choice, with 32 percent of the seniors planning to enter education as a long-run career; (b) choice of education showed great stability from the freshman to the senior year; and (c) background factors such as parental SES and size of hometown *were not as predictive* of choice of education as having a value commitment to people rather than to making money, being female, and having a relatively low-grade performance record in college. Because these other variables predicted choice of education better than did status factors, the conditions under which upward mobility drive affects choice of the profession seem complex. To explain how this

background eventually comes to affect behavior on the job becomes even more difficult. The conditions under which teaching becomes a path of upward mobility and the possibly unique manner in which an upward mobile teacher views his career are nevertheless topics of considerable interest to students of teacher behavior and the American social class system.

As Davis examined the power of a single predictor, he made elaborate use of multivariate analysis techniques. He found high intercorrelations among some of the predictive variables, such as low SES and coming from a smaller town. Because these predictors of career choice are so highly intercorrelated, future studies of teacher recruitment must employ a multivariate technique if they are to have genuine significance.

Werts (1966) checked out the possibility of retrospective reporting error in Davis' study by analyzing a sample of freshmen in heterogeneous colleges rather than seniors as studied by Davis. Davis' findings were supported in that the low SES students overchose engineering and teaching. Werts used a specific measure (father's occupation) rather than Davis' composite index of SES and found that teaching as compared to other occupations was overchosen by sons of farmers, manual laborers, semiskilled workers, clerical workers, and skilled workers; it was underchosen by sons of businessmen and salesmen. A similar pattern appeared for women students.

Still another question concerning the status of the teacher has arisen amidst the contemporary concern with the culturally and economically disadvantaged child. What sort of teacher does he have across the country? Does the fact that he is likely to attend a slum and a predominantly minority group school mean that he will be exposed to a special type of teacher? Is any particular status background of a teacher especially desirable for the education of this type of child?

Additional References: Drumheller (1963); Pavalko (1965).

Race as a Teacher Status Characteristic

As the nation struggles with the problems of school desegregation and optimal classroom settings for Negro children, the racial status of the teacher has become an important question. Analysis of the 1960 census (NEA, 1965) showed that 91 percent of the teachers below the college level are white. Nonwhite teachers were more likely to work in central cities and less likely to teach in other urban or rural areas. More of the nonwhite teachers had a college degree than the white teachers; also, white teachers, particularly the women, appeared to be older than nonwhite teachers. Of the Negro male teachers, 47 percent had wives who were also in teaching.

Beyond these straightforward demographic data, we have the results of an elaborate survey by the Office of Education (Coleman and others, 1966) based on a stratified two-stage probability sample of public schools containing 900,000 pupils and carefully designed to provide a basis for comparisons of Negro and other minority students with white students. The investigators sampled more heavily in areas where the nonwhite population was clustered so that the final sample would be half white and half nonwhite.

In the nation as a whole, the average Negro elementary student attended a school where 65 percent of the faculty were Negro, and the average white elementary student attended a school where 97 percent of the faculty were white. Coleman found an interaction between racial status of the teacher and the status of the school in which he worked: commitment to teaching was, for Negro teachers, higher among those who taught in white schools: for whites, commitment was slightly higher among those who taught in Negro schools. Fewer Negro teachers in small-town and rural schools revealed strong commitment compared to those in suburban schools: among white teachers, there was no association between commitment and location of the school.

Both in the main body of survey data and in a subsurvey of public colleges, Coleman found no evidence that future Negro teachers were outstanding in verbal competence as compared to Negro classmates. The same held true for comparisons between white future teachers and other whites. Coleman concluded that we cannot look forward to an especially talented corps of Negro (or white) teachers in the near future.

What is the effect of racially matching teacher and student? Is it an undesirable characteristic of segregation, or is there a more accurate perception and understanding of cultural nuance between teacher and child of the same racial background? Unfortunately, no available study helps to answer this question. As with all demographic correlational research involving the racial variable, it is most unwise to stop with a simple correlation of racial characteristics and some dependent variable: race is so strongly correlated with SES and other variables. The above-described census analysis of characteristics of teachers of different races (NEA, 1965) illustrates this principle by showing that age and geographical differences correlated with race of the teacher. When the study by Davis (1965) controlled other demographic characteristics, the power of race as a predictor variable *disappeared*. Davis was able to "wash out" the correlation of race with choice of education as a career through the use of control variables. It seems that much of what appears at first analysis to be a function of race can better be interpreted as a function of characteristics *correlated* with race in his sample, e.g., coming from a smaller city and having a lower status family background.

Perhaps because of the social saliency of the racial characteristics, we stop in our analysis with "showing that the races are different" just when

we should be pushing on to uncover other factors helping to produce the difference observed. That this additional research is necessary for policy making can be seen in the Office of Education survey by Coleman and others (1966). Since the major aim of the survey was to document the proposition that *there are differences* in the school environment of the Negro and white child, when the study considers characteristics of the teacher, it considers *only one characteristic at a time*. Since we know these characteristics to be intercorrelated, we cannot formulate propositions leading to recruitment and training policies until we can evaluate which teacher characteristics best account for observed differences.

Gottlieb (1964) attempted to move on to a consideration of how Negro teachers differ from white teachers in their attitude toward Negro students. He found that Negro teachers saw Negro students more favorably and with more individualized characteristics than did white teachers and were more highly satisfied with their teaching situation. Because these two groups of teachers were also different on a number of background variables, we cannot tell, however, whether these perceptual differences were a function of the race of the teacher. Future research, if it is to form a basis for policy making, will have to benefit from Charters' advice and study *how* race comes to affect the teacher's behavior, while simultaneously controlling correlated background variables.

Additional Reference: Greene (1962).

Status of the Teacher in the Slum School

Are selective recruitment policies operating so that a certain type of teacher, considered to be inferior by professional standards, is overrepresented in depressed area schools? Are discouraging conditions in such schools taking their toll of teachers so employed? Early literature certainly implies an affirmative answer to both these questions. In a secondary analysis of a study of school principals in larger cities, Herriott and St. John (1966) provided some data on the degree of relationship between the social class composition of urban schools and particular characteristics of the staff. Herriott and St. John were oriented to social policy questions and they had the advantage of a national probability sample designed to highlight the urban school. Results dealing with status characteristics of staff and replicated on the elementary, junior high, and senior high school levels were as follows: (a) Teachers in higher status schools were more experienced and older. (b) Teachers in lower status schools were more likely to be nonwhite or Catholic. (c) Teachers in higher status schools were more likely to be of high status family origin. (One wonders if this would hold true if the variable of race were controlled.) Contrary to predictions, there were no consistent differences in highest academic degree held or reported quality of college work. It was most unfortunate that the

analysts were unable to obtain age data in a form usable as a control variable because of the correlations among experience, length of training, and age.

Although the teachers at low status schools were more likely to wish to move to a school in a better neighborhood, *the prediction of a significantly lower career satisfaction for teachers in lower status schools was not upheld*. In other words, present job difficulties in slum schools did not seem to affect their appraisal of the professional aspects of their careers.

This study is a welcome antidote to overly simple generalizations about the depressed area urban school. Nevertheless, without any conceptualization as to how these particular staff characteristics operate on the student, given the context of the slum school, it seems most unlikely that more research along these same lines will point to problem solutions. Again, we find the results difficult to use even as an initial basis for such a conceptualization because of the lack of control variables. Nevertheless we certainly gain a proper respect for some of the complexities of a problem involving characteristics of staff, characteristics of a school environment, and effect on pupils.

Additional Reference: White (1966).

Professionalization: A Status Rise

In the past several years, we have seen the first attempt to study teacher status with a more abstract sociological approach. Starting from organizational theory concerned with professionalism and bureaucracy, both Colombotos (1962) and Corwin (1963, 1965, 1966) have defined the status of the teacher in terms of the expectations of the incumbents of the position and the expectations of the incumbents of reciprocal positions. Additionally, Corwin (1963) pointed out that the drive for professionalism among teachers today can easily be seen as a drive for higher social rank, the meaning of status as used earlier in this review. These investigators turned their attention to the organizational conditions favoring increased professionalization, the socialization factors leading to professionalism in the individual, and the organizational consequences of a high degree of professional ideology and behavior among teachers.

In his report to the Office of Education, Corwin (1963) undertook a major review of the organizational literature on professionalization as a general process and its consequences for the functioning of the bureaucracy, especially the consequence of increased conflict within the organization. Viewing the history of the teaching profession, he saw the strong tradition of lay control over educators as continuing into the modern period as a result of the administrative need to maintain internal coordination in the newly enlarged school systems. In opposition to this long-standing pressure for tight control is the teachers' newly increased

sense of expertise and desire to control work conditions, a symptom of increasing professionalization.

Corwin constructed many indices of organizational characteristics and conflict, but the two of major concern here are the scales measuring professional and employee orientations of teachers. Conceptually, these orientations are situational-personal in nature and are seen as dimensions which can vary independently of each other. Determinants of these orientations are the degree of standardization of work, the centralization of the decision-making process, and the type of work specialization (specific task vs. client-centered). Two Likert-type scales based on these concepts were constructed to measure the orientations in a sample of teaching faculties. The Employee Scale deals with loyalty to the administration, the organization, and the public, with endorsement of standardization, and with the belief that teaching competence is based on experience. The Professional Scale deals with orientation to clients and professional colleagues, with the belief that teachers should have decision-making authority, and with the view that competence is based on expert knowledge. The scales were studied as to their reliability and correlation with membership in criterion groups.

In analyzing his preliminary findings, Corwin (1963) emphasized the value of using the professionalism and employee-orientation variables jointly in order to get predictive results. For example, the expressed need for more academic freedom for teachers correlated negatively with Professional Scale score alone, but those who simultaneously had high Professional and low Employee Scale scores were highly likely to want more academic freedom. Holding an office in a community organization was much more highly correlated with the Employee Scale than with the Professional Scale. Also, there was a sharp difference in emphasis on goals of education between high Employee Scale scorers (who emphasized knowledge of subject matter) and high Professional Status scorers (who emphasized character training). Note the wide variety of observable consequences that this difference in status orientation predicts.

In a more detailed analysis, Corwin (1965) saw the drive for professionalization as a necessarily militant process within education because teachers must wrest control of their work from the traditional superiors (the community) and from their modern-day counterparts (the administrator). Conflict behavior was measured by an initiative-compliance scale based on hypothetical incidents of conflict as well as by an index of actually experienced conflict. Corwin found that there were other bases for conflict and militancy than professionalism; but he did succeed in identifying a group of professionally oriented teachers who were, in every organizational sense, militant.

In his latest report of more extensive analyses of these data, Corwin (1966) found that his major hypothesis of a positive association between professionalism of a school and its rates of organizational tension and

conflict was confirmed in most pertinent comparisons. The degree of bureaucratization did not, however, predict the degree of professional orientation or professional behavior of the staff as was originally hypothesized. The degree of bureaucratization was significantly associated with employee orientations of the teachers. The interrelationships of conflict, degree of bureaucratization, and professionalism are obviously complex, and more theoretical work will be needed to permit refined statements on the relationship between any two of the factors, given a specified state of the third factor.

As a whole, the use of the carefully specified sociological model of professionalism sheds much light on a word used with diffuse emotion in teaching today. If future research workers continue to specify the organizational conditions most conducive to increased professionalism without a disabling degree of conflict, the administrative specialist will have a reasonable basis for policy formulation. Particularly useful is Corwin's view of conflict as a normal characteristic of organizations, and his work suggests that we begin to look at different types of conflict as checkpoints in measuring the organizational consequence of proposed changes.

A sociological approach to professionalism was also used by Colombotos (1962) in his correlational study of potential pre-job and on-the-job socialization factors associated with a high degree of professionalism. His definition of professionalism included the ideas of exclusive technical competence requiring specialized training, freedom from outside control, and a service ideal item. Using a four-item index and a questionnaire technique, he gathered data from 515 secondary school teachers in a metropolitan Midwestern system. Contrary to his predictions, he found that women teachers are more professionally oriented than men. Especially provocative was the finding that career orientation is more important than social class background in predicting professionalism, i.e., wishing to move into administrative channels was associated with a low degree of professionalism. Career-oriented men low in professionalism (who would like to move upward through administrative channels) came in disproportionate numbers from working class backgrounds. This finding gives a new twist to the view of teaching as a channel for upward mobility: the classroom teaching slot may be viewed by male aspirants as the first step in a two-step mobility process from a working class background into an administrative position. If this is true for a large number of male teachers, it has important implications for the study of upward mobility as well as for the teacher's role played with an eye to promotion into administration. Colombotos' analysis of job socialization factors revealed that professionalism varied positively with advanced training and, for the men only, with degree of participation in the American Federation of Teachers. The latter finding was similar to Corwin's finding (1963) of the association of militancy with professionalism. Colombotos derived his predictions in an

elaborate manner, but his data analysis, even when it was multivariate, was confined to the use of conventional variables and related to only a few of his theoretical concepts. When his predictions were not confirmed, he was typically reduced to *ad hoc* interpretations: this difficulty was particularly apparent in his explanations concerning the relation of sex role to professionalism.

Both Corwin and Colombotos demonstrate that the typical stereotypes about professionally oriented teachers, as either nonmilitant or predominantly masculine, do not hold. Judging from the number and variety of correlates found in this initial research on professionalism, one concludes that the concept has great value for both organizational and adult socialization research. The construction of sets of interrelated, testable propositions, using these concepts and some of the observed relationships, seems entirely possible at this juncture and might lead to the systematic derivation of new empirical consequences. Of all the approaches to the study of status reviewed, this one appears to have the greatest heuristic value.

Additional References: Cicourel and Kitsuse (1963); Fishburn (1962); Moeller (1964); Perry and Wildman (1966).

Conclusion

Different problems, such as the raising of teachers' status and the recruitment of effective teachers for particular school settings, require different definitions of status. We have examined studies relevant to the following theoretical definitions of status:

1. General social rank-ordering by the public at large
2. Total considered worth of an occupation by the incumbents of that occupation
3. Standing on a number of important social dimensions considered one at a time (father's occupation, race, and sex)
4. The sum total of expectations for a given position within an organization (the school).

The period under review has been distinguished by excellent descriptive studies of finite populations, such as the studies of the characteristics of the 1961 population of teachers, college graduates of the same year, and staff associated with school populations in problem areas. These descriptive studies suggest certain problems with broad generalizations, often widely accepted, such as the middle class origin of teachers and poor teacher preparation of staff in depressed urban areas. In forcing us to break up and qualify some of these notions, the surveys prepare us to move on to specifying the conditions under which the relationship will be found between teachers' status and some variable of educational interest (such as teacher behavior, degree of organizational conflict, or pupils' status).

This specification of conditions and underlying factors has been most evident in the studies of professionalism among teachers.

If we are to develop research of real practical utility for policy formulation, two changes are needed in the current research pattern: (a) we must accelerate the shift to theoretically oriented studies with propositions in an antecedent-consequent form, and (b) we must pay considerably more attention to correlated variables affecting the central propositions.

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CHAPTER VII

Legal Status of Teacher Personnel

LeROY PETERSON

The legal status of teacher personnel is firmly grounded in statutes and court decisions. These are established by forces largely outside education and are subject to a constancy not found in other aspects of education. As a result, most of the studies dealing with the legal status of teacher personnel are unlike those in other areas of educational research in that many of the factors cannot be reoriented or controlled. Thus, research in this area has, with few exceptions, become standardized within the framework of review and analysis of statutory enactments and the study of judicial interpretations. As a consequence, a review of research in this area most logically emphasizes findings and interpretations rather than research methodology.

Whether research in the legal aspects of teacher personnel should utilize an approach more closely akin to research methodology in other educational fields is an interesting speculation. Hypothesis testing and controlled experimentation with teachers having different legal status would be difficult; it obviously would not be impossible in intrastate studies where the legal status of staff personnel shows distinguishable variations. Future research in the legal status of teacher personnel might advantageously design and try out new research approaches appropriate to this field.

The characteristics of articles dealing with the legal status of teacher personnel have compounded problems of selection. By their nature most of them try to represent a thoughtful analysis of the present legal status. Some research is necessary to permit the authors to draw their conclusions. However, space allotment permits a review of only those publications in which the major focus has been on research. Additional valuable and authoritative information on the legal status of teacher personnel is listed in the *Education Index* under the topics Certification, Liability, Pensions and Retirement, Personnel Records, Strikes, Teacher Contracts, Teachers' Unions, and Tenure.

The research studies reviewed in this chapter are classified under the following major headings: Collective Negotiations and Bargaining, Academic Freedom, Loyalty Oaths, Legal Aspects of Employment, and Teacher Liability.

Collective Negotiations and Bargaining

Problems of vital concern to teachers today arise in relation to the rights and responsibilities of teachers under collective bargaining regu-

lations. These regulations have been treated in a number of publications describing several dimensions of one important aspect of the legal status of teacher personnel.

Lieberman and Moskow (1966), through a combination of wide contact with organizations concerned with collective bargaining, firsthand experience, and research, produced one of the most comprehensive books in this field. In addition to an historical background supplemented with an extensive appendix, the study explored different approaches to collective negotiations and bargaining; analyzed the policies of professional and lay organizations as they relate to collective negotiations and bargaining; analyzed the statutes of the states having collective negotiations and collective bargaining for teachers; and analyzed bargaining power and impasse procedures, antistrike laws, coincidental resignations, and sanctions. The authors pointed out that scholars, governmental officials, and business and labor leaders have been trying unsuccessfully for years to find a suitable substitute for strikes in private employment, and concluded that there was a measure of naïveté in the way some educators think they have solved the problem. Examples of grievance procedure were presented, as well as examples of evaluative criteria for the handling of grievances. The role of the administrator in collective negotiation and its impact on school administration was studied. The authors explored the possibility of one organization for teachers, pointing up the advantages and disadvantages.

Excellent legal research on teacher negotiation and bargaining has been done, over a period of time, by Seitz. In one of his earlier analyses of the rights of public school teachers to engage in collective bargaining, Seitz (1963) concluded that, at least by implication, schools may make the decision to bargain collectively whether encouraged by law or not. He offered appealing justifications for good-faith collective bargaining for teachers. From a substantial array of legal evidence, he concluded that a state may halt a school strike and picketing in support of strike activities.

In an enlargement and updating of his previously produced materials, Seitz (1966b) concluded that the wording of the National Labor Relations Act gives the most far-reaching definition of the concept of good-faith bargaining yet stated. It imposes a duty on employers and unions to "meet at reasonable times and confer in good faith with respect to wages, hours, and other terms and conditions of employment." Such obligations do not compel either party to agree to a proposal or require a concession.

The study further concluded that although in private employment the requirement of membership in unions and the authorization of dues check-off are permissible unless outlawed by right-to-work laws, they are questionable in public (school) employment. Even if provided by statutes, courts would likely find these practices improper, as they did in a Montana case.* Where the state statutes require open meetings of public bodies

* *Benson vs. School District No. 1*, 136 Mont. 77, 344p (2d) 117 (1959).

for all formal action and deliberations, collective negotiations may be an exception.* However, the introduction, the deliberations, and the adoption of the bargaining recommendations must take place at open meetings. The author concluded that in the field of government the right to strike does not exist.

Seitz (1966a) has more recently further explored the various legal aspects of collective bargaining and made these conclusions: (a) The prohibition against a public employee's joining a union is fast disappearing as is the prohibition against collective bargaining. (b) The National Labor Relations Act requires the parties to confer in good faith. Such conferring requires a recognition at least that collective bargaining is a shared process and that each party has a right to play an active role. (c) The courts do not agree that a party (school district) which must bargain collectively has been forced to delegate away its authority. The courts recognize that the party has assumed extra burdens, but the ultimate decisions are the board's. (d) Almost all public bodies desire to bargain on an exclusive basis with the organization that has been selected to represent the majority of the employees.

Seitz's conclusion that the courts do not agree that a school district has been forced to delegate its authority in collective bargaining appears well supported in law. It is much better documented than Radke's (1964) contention that collective bargaining violates the legal principle that legislative authority may not be delegated but must be exercised by the body in which it is vested.

A study in the *University of Chicago Law Review* (1966), while concerned with the laws of Illinois and the Chicago teachers, has implications for collective bargaining activities elsewhere. It was concluded that the rights of boards of education to bargain collectively must be found either in direct statements in the statutes or in clear implications. Because of its close relationship to relieving teacher discontent, such power might or might not be inferred from general statutes. The study concluded that a court pre- pared to find implied collective bargaining power need not be discouraged by the illusory problem of "delegation of power," but the contract should be limited to one year during which the board retains the same membership. An exclusive representative does not deny equal protection to the minority of teachers, nor does it deny the constitutional right to petition, if the board examines suggestions by the minority.

Moskow (1964) conducted a comprehensive investigation of the operation of collective bargaining in 20 school districts. He concluded that experimentation and diversity in collective bargaining are not undesirable in themselves, but standards and rules are necessary to make certain that teachers are not denied basic rights and equities. Inequities can be corrected by legislation including provisions for the following minimum essentials: (a) protection of the right to join, or to refrain from joining,

* West's Wisconsin Statutes Annotated, Sec. 14.90.

any organization: (b) provision for exclusive representation in conferences or negotiations with boards of education; (c) requirements that the school board meet and negotiate with the representatives chosen by a majority of teachers; (d) granting to an impartial agency the authority to make bargaining unit determinations, to conduct representation elections, to mitigate unfair labor practices, and to establish rules for the administration of the act; and (e) provision for fact finding in the event of an impasse.

Rose (1965) explored on a limited basis the question of whether the individual is protected by the union which represents all employees. It was his conclusion that in collective bargaining the totality of employees is represented—an individual rather than the individual employee. Thus, an individual's rights may be destroyed by a union representing the group without giving the individual an opportunity to be heard.

Clark (1965) analyzed the posture and role of the National Education Association and the American Federation of Teachers in collective negotiation in five selected school districts in Illinois. He found teachers willing to support the right of teachers to strike. The majority of teachers and administrators believed that sanctions were more ethical but much less effective than strikes.

Bitner (1961), by means of field study techniques, critically examined the inauguration of the American Federation of Teachers locals in three suburban school districts in New York. He provided as backdrop the history of the teacher union movement in the United States. His study showed that the teacher union movement had grown in those communities where there had been controversy between teachers and administrators or teachers and school boards. These controversies were generally confined to teacher salaries or to conditions of employment.

Cheshier (1965) reviewed the use of sanctions historically and found that they have been used against members only three times in over 100 years—in 1946, 1962, and 1963. They have been employed against boards of education and on a statewide basis (Utah). A random sample of teachers in Tennessee approved many forms of sanction. However, they did not approve (a) public censure of individuals, (b) public censure of affiliated organizations, (c) mass refusal to sign contracts, (d) refusal of all non-contractual assignments, (e) immediate contract termination, or (f) protest demonstrations.

Academic Freedom

One area currently studied most widely is academic freedom. While many of the studies were concerned with professors, nearly all the principles identified apply equally to other teacher personnel. The summer 1963 issue of *Law and Contemporary Trends*, published by Duke Univer-

sity Law School, deals with various facets of this problem. Articles from this publication considered in this review are richly documented with legal references based on extensive search. Fuchs (1963), presenting the background of academic freedom, concluded that it rests on a variety of cultural and institutional factors which change from time to time and from place to place. In the United States today, it embraces more sweeping claims to independence and a vastly greater range of educational activities than ever before.

Murphy (1963) substantiated the proposition that, in the struggle for academic freedom, academic tenure and due process are the major instruments for achievement. To date, decisions of the Supreme Courts are harbingers of what is to come rather than outstanding contributions to academic freedom. What is now needed, according to Murphy, is the Court's squarely invalidating any termination of a teacher's employment without a hearing. Without such protection, teachers are now dismissed for carrying on activities in behalf of the Court's own decisions—such as those on the guarantee of racial equality.

Emerson and Haber (1963) established a number of directing principles from a comprehensive analysis of legal literature and other sources. Important among their conclusions was the principle that a faculty member, outside his classroom performance and his professional research and writing, shall not be subject to discipline for the content and manner of his communications or for organizing or associating for the purpose of communicating, as long as his facts, hypotheses, and conclusions can be corroborated by scholarly research or there is clear implication that he is not communicating as an expert.

While presenting only limited research, van den Haag (1963) stated the meaning of academic freedom in concise and practical terms. He concluded that in the United States, freedom is a constitutional right guaranteed all citizens. Its corollary, academic freedom, is an intra-academic privilege which assures the independence of professors to perform their professional tasks. The author attempted to establish the bounds of academic freedom as including the right to comment on matters outside as well as inside a teacher's special field and regardless of context. If a person has a right to speak out on behalf of premarital chastity, he also has a right to speak out on behalf of premarital sexual relations. If he is dismissed for expressing the latter views, academic freedom is violated. One is not free unless one has a right to hold and express any intellectual conviction.

Academic Due Process

To describe clearly the dimensions of academic due process, Joughin (1963) made a systematic analysis of the elements of recent case histories and aspects of policy statements of the American Association of University Professors, the Association of American Colleges, and the American

Civil Liberties Union (ACLU). On the basis of this analysis, he concluded that academic due process is not legally due process. It is rather defined as desirable procedures applicable within educational institutions.

In the 1951 statement of the ACLU, the definition was restricted to issues of academic freedom, but there is nothing in the term *academic due process* which makes it inapplicable to the trial of other academic issues. This study explained the features necessary to achieve academic due process and reviewed cases of overall denial of academic due process. The summary is in a sense a statement of the future of academic due process. The author presented four observations: (a) There will be a change in academic due process resulting in ordinary self-scrutiny. (b) Academic due process will develop as it confronts the threats always made against anything which is in any way connected with freedom. (c) Academic due process will need to keep its integrity when it sees the seductive success of other systems which have proven successful in like affairs, for example, the system in the Civil Service. (d) Academic due process will, in the main, be closely identified, as a necessary instrument, with the fundamental principle of intellectual freedom.

Political Freedom

Siemers (1965) studied the question of whether professors are limited in their right to run for political office and analyzed the nature of these limitations. The history of the development of academic freedom, particularly the freedom to be a candidate for public office, was investigated. The study also included a detailed examination of university policy statements and 10 case studies of college professors in the political arena. Three major conclusions were made: (a) Professors are limited in political activity by institutional policy: leaves of absence or resignations are required. (b) Professors are limited by lack of campaign funds: they lack a "built-in" political group to back them. (c) Professors have the self-imposed limitation of an historical image characterized by a nonpolitical or noncontroversial attitude.

Additional Reference: Fellman (1962).

Loyalty Oaths

Loyalty oaths and academic freedom are so closely intertwined that a distinction is sometimes difficult. This difficulty also applies to research in this area. In fact, Morris (1963) treated academic freedom and loyalty oaths as one topic. He pointed out that the fundamental cleavage between academic freedom and loyalty oaths is that in the view of academic freedom advocates, the function of education is to produce a disciplined, critical and questioning mind with the power of independent judgment: in the view

of loyalty oath advocates, education is the means of instilling and propagating certain definite and approved political and social beliefs. Loyalty oaths serve the function of perpetuating the orthodox.

A stricter court inquiry into oaths is appearing, and questions not formerly asked are being examined. Courts are carefully analyzing oaths required for employment and are holding a new standard of objectivity for loyalty oaths. In commenting on loyalty oaths for teachers, the author concluded that the Constitution guarantees freedom of thought and expression to all who live in America. "All are entitled to it and none needs it more than the teacher" (per Justice Douglas, in *Adler vs. Board of Education*, 342 U.S. 485, 508; 1951).

Bryson (1963) developed basic data in his doctoral dissertation, reported in the October 1963 issue of the *Review*. He drew a number of conclusions relating directly to loyalty oaths for teacher personnel: (a) In interpreting teacher oaths, the courts are not concerned with the wisdom of oaths, only their constitutionality. (b) According to judicial opinion, loyalty oaths (generally) constitute a just and reasonable aspect of teacher employment. (c) Since the Civil War oath cases, loyalty oaths or non-oath laws have not been declared unconstitutional on the grounds that they are *ex post facto* laws. (d) State and local governments have the right to determine who will teach their children by means of loyalty oaths and loyalty non-oath laws. (e) Freedom of speech, thought, and belief or freedom of press and assembly are not abridged by loyalty oaths or loyalty non-oath laws. (f) The courts have upheld the legality of requiring teachers to testify when called by authorized investigation committees.

Additional Reference: Key (1962).

Legal Aspects of Employment

There has been limited research on the following aspects of teacher employment: racial discrimination, seniority, tenure and dismissal, leave provisions, and retirement. Each of these will be considered briefly.

Racial Discrimination in Employment

The *Michigan Law Review* (1966) examined the question of whether the teaching personnel as well as the pupils must be racially integrated to meet constitutional requirements. It was concluded that school board policies which discriminate against teachers because of race are in violation of the equal protection clause of the Fourteenth Amendment.

Seniority in Public Education

Punke (1965) presented a many-faceted approach indicating how seniority of teachers can best be determined. In his study he examined a wide

array of literature from a variety of disciplines and analyzed statutes and judicial decisions. He noted a changing concept of seniority and its importance in American life over a period of time. The major thesis of his study was that efforts to discontinue seniority rights among teachers will not result in great long-range improvement of public education. The realistic approach is through the improvement of the system. A number of suggestions directly applicable to teachers were included.

Tenure and Dismissal

Closely related to the seniority of teachers is the tenure and dismissal of teachers. In this area the National Education Association has been most active in research and publication. Not only has the NEA Research Division (1965c) analyzed and compiled pertinent data relative to tenure and contract laws of the states, but it has annually analyzed tenure court decision in all courts of record (NEA, 1964c, 1965b, 1966d). In addition it annually shows the legislative changes which have taken place in this area (NEA, 1963a, 1964a, 1965a, 1966a). Court cases on tenure also were analyzed by Garber (1963, 1964, 1965, 1966). Most of the above research tends to emphasize *what is*, but the NEA Research Division (1963a, 1964a, 1965a, 1966a) also noted *what should be* by its presentation of the goals of state education associations in comparison with each year's legislative enactments.

The American Federation of Teachers also has concerned itself with tenure and in 1966, under its research grant program, published *A New Tenure Act* by Leahy (1966). This proposed comprehensive model was based on analysis of existing tenure laws and presented a number of unique proposals worthy of consideration.

Behling (1964) analyzed appellate court decisions between 1926 and 1963 and current tenure statutes pertaining to dismissed public school teachers to determine the minimum levels of conduct and competence required of teachers. Briefs of 70 pertinent cases were included in the dissertation. Tenure statutes were analyzed to ascertain the interrelationships between concepts held by the courts and the legislatures. The chronological study of cases revealed that the exemplar responsibility of teachers has remained important over a period of time. Judicial decisions indicated that the teacher must be honest, cooperate with administrators and boards, perform at an accepted level of proficiency, conduct himself so that he does not have a detrimental effect on his students, and show self-restraint, although some latitude is permitted when dealing with adults.

Erickson (1965) studied 237 cases of dismissal which had been either in litigation or in dispute from 1945 through 1963 in the State of Washington. The study revealed that the manner in which the dismissals were handled was inconsistent with Washington law and showed greater inconsistency in the interpretation and application of administrative procedure

in dismissal than in determining the cause for dismissal or in manner of securing evidence.

Laman's (1963) investigation of various aspects of the teacher dismissal problem in Arkansas led to these conclusions: (a) Teacher dismissal was not extensive. (b) The vast majority of dismissed teachers were dismissed for sufficient cause, although the procedures used were dubious. (c) Men were more frequently dismissed than women, and high school teachers were more frequently dismissed than elementary teachers. (d) Teachers were less often dismissed in "North Central" schools than in "B-rated" schools. (e) Most teachers were given an opportunity to resign before dismissal. Teachers seldom requested a hearing despite the administrator's willingness to grant one. (f) Dismissed teachers were often given letters of recommendation—not misrepresentative but in avoidance of remarks jeopardizing the teacher's possibility of future employment. (g) Keeping a teacher informed of his success or failure seemed to prevent unpleasant repercussions in dismissal cases. (h) Most administrators kept teachers on their staff when they would have preferred to dismiss. (i) Problems of teacher dismissal were tied closely to the inability of the school to attract strong candidates. To decrease teacher dismissals he suggested establishing fair and straightforward continuous evaluation.

Moore (1965) studied the legal framework of statutes, court decisions, and legal opinions related to procedures in disciplinary cases involving the suspension, demotion, or dismissal of teachers. He found no legal procedures. Only three districts in California to establish grievance procedures for handling grievance cases. Incompetency proved to be the leading cause for disciplinary action. Custodians and bus drivers were involved in a disproportionately large percent of disciplinary cases; secretarial, clerical, and food personnel, in a disproportionately small percent. Only 9 percent of the problem cases were handled by demotions; only 4 percent, by suspension.

Hubert (1966) analyzed the Texas law dealing with the dismissal of public school employees and examined and evaluated the practices employed by local school boards in a number of states. The essential conclusions were these: (a) The administrative process governing teachers' dismissal is likely to be fair only if tempered by procedural restraints. (b) It cannot be assumed that school boards will always consider the rights and interests of their employees. (c) In Texas, teachers are sometimes dismissed for insufficient cause and without an opportunity to be heard in their defense. In states with tenure laws, school boards have resorted to devious ways to evade the requirements of the law. (d) To avoid unfairness, one state (California) has deprived school boards of their dismissal power by entrusting that function solely to the courts. (e) The argument that procedural restraints will impair the administrative process has no force

with respect to teacher dismissal. (f) A simple and workable set of procedural rules would serve to ensure fairness to teachers and enable school boards to act more effectively.

While the research by Mart (1961) was limited to an analysis of two important cases, the timeliness of his topic justifies mention of his conclusions: (a) Public criticism of the school administration by teachers does not constitute unprofessional conduct when there is no disruption or impairment of the school system, and (b) teachers must be given protection in the courts against dismissal for criticism of the public school system since they are in a position to bring valuable views, not available from any other source, to the public attention.

The *Utah Law Review* (1965) maintained that teachers who publicly opposed the action and policies of the superintendent and board of education were not guilty of immorality as was held by the Alaska Supreme Court. That journal cited decisions by the U.S. Supreme Court holding that such action was not immoral and indicated that in several jurisdictions the rights of teachers to campaign in school elections and to speak out against the administration and boards of education had been sustained. From numerous cases the author defined immoral acts to include such activities as drinking on the school ground; misappropriating school funds; drinking beer, playing a pinball machine, and shaking dice for drinks in front of students; making false statements in loyalty oaths; and submitting affidavits containing false statements to a public agency.

After an extensive and scholarly analysis of court cases relating to dismissal for insubordination, Punke (1966) reported that, legally, insubordination is constituted by such a defiant attitude as to be equivalent to willful disregard of reasonable rules, as well as disobedience, or a willful disregard of expressed or implied directions and refusal to obey reasonable orders. It is intentional disobedience. Some examples follow: (a) Even if a board is prejudiced in preferring charges, it is irrelevant if the charges are substantial and the evidence supports the charges. (b) Where a board passes a rule, the teacher must be informed of it or he cannot be held guilty of insubordination if he doesn't obey. (c) Excessive teacher absences without permission constitute insubordination. (d) Where a state superintendent makes a rule against wearing religious garb in school, it is reasonable; failure to obey is insubordination. (e) Although teachers are required to use a high degree of control in dealing with children, they are to be judged by ordinary standards of civility when dealing with adults. If sufficiently provoked, they are not insubordinate for losing their tempers momentarily and severely criticizing board members. (f) Continued uncontrollable temper and nervousness over a considerable period of time, together with noncooperation with other faculty members, is grounds for dismissal. (g) Refusals to come to school at the time set by the superintendent and to do a fair share of playground supervision when requested are grounds for dismissal. This research also analyzed litigation on various

problems concerned with breach of teachers' contracts, the mitigation and awarding of damages, personal liability of board members for breach of contract, and related problems.

Leave Provisions

The NEA Research Division (1966b) directly and succinctly described teachers' legal status in leave of absence for sickness, maternity, and sabbatical purposes. This study showed the list of states having leave provisions, and the days available and accrual days. Information also was presented on the local board's authority in this area and on board authority to exceed the mandatory leave provisions. Explanatory materials indicating the current status, excerpted directly from statutes, were given together with citations of statutes of the several states.

Retirement

A number of states make continuing analyses of their teacher retirement systems. Frequently these studies are not published or, if published, are narrowly circulated. While these studies are directed to the interest of the particular state, they often contain information embodying state-by-state comparisons. Information of this type is most easily obtained directly from the retirement systems or the teacher retirement system of the states.

The National Education Association and the National Council on Teacher Retirement (1965) developed a state-by-state analysis of teacher retirement provisions which dealt with the several aspects of teacher retirement. The relationship with social security provided a basis for division of the states. The summaries described the major provisions of the laws under which retirement systems operated including information on financing, administration, social security, and benefits paid.

Another publication describing the legal status of teacher retirement is the Retirement Income Series. This publication is prepared by the NEA Research Division (1966c) for the National Council on Teacher Retirement. Each issue deals with the legal status of some aspect of retirement. A particularly useful issue is Number 53, November 1966, which presented information on the compulsory retirement age for teachers on a state-by-state basis. Relevant court cases on this topic were also analyzed and the major findings presented.

Additional References: Brighton (1965); Utterback and Christis (1965); Ware (1965).

Teacher Liability

Teachers may be held liable for their acts under a variety of circumstances. While the teacher is much more likely to be sued for causing

physical injuries, other types of injuries may also be the basis of suit. Hornback (1964) examined the question of the privilege of certified personnel under the law of defamation. Through the use of standard legal research techniques, he sought answers to these questions: What is a defamatory communication when related to a certified person? What defenses are available against an act of defamation? He concluded that, if the teacher is to be free of liability, his communications must be given reasonably and in good faith only to those who are entitled to have them. Spiteful behavior, ill will, or malice in furtherance of one's own interests to the detriment of others cannot be legally supported. Communications by certified personnel which contain value judgments must be carefully framed so they will be adjudged reasonable. If the above suggestions are followed, a defense of qualified privilege is available to the teacher.

A comprehensive study by Marshall (1963) was concerned with the liability of public school teachers for acts or omissions where the teacher has direct supervision or authority over public school pupils in the classroom, school buildings, school grounds, and on the way home from school. The study concentrated, but not exclusively, on cases involving the teacher in normal functions during the regular school day. The following conclusions were reached:

1. The teacher's duty and responsibility for the supervision of his pupils extends from the time the child leaves home until he returns. Control extends after the child has reached home in acts which influence the morale and discipline of the school.

2. The teacher must be aware of the danger of acting beyond the scope of his authority. He does not stand *in loco parentis* in all matters.

3. The teacher increases the risk of legal action when he assigns pupils tasks not directly associated with the course of study.

4. While the school board is primarily responsible for the safety of equipment, the teacher is expected to see that the equipment is used in a safe manner and to take all necessary steps to protect the pupils.

5. The teacher must exert reasonable care to avoid injury to pupils. He is expected to foresee the danger of injury as a normal person would.

6. If dangerous activities are to be performed by students, the teacher is expected to increase the amount of care exercised.

7. The teacher must report any unsafe conditions to the proper authorities.

8. The teacher increases the risk of liability when he leaves students unattended.

9. The teacher increases the risk of legal action when he uses corporal punishment. However, in most states corporal punishment is supported if administered in a reasonable manner.

After a penetrating analysis of constitutional provisions and court cases, Knowles (1964) reported on the legal responsibilities of staff for such school operations as search of students and lockers, cooperating with police

in interrogation of students, and school officials' interrogation of students when civil and/or criminal offenses are suspected. He pointed out that constitutional guarantees against unreasonable search are set forth in the Fourth Amendment of the U.S. Constitution and are made applicable to the states by the Fourteenth Amendment. If a teacher is guilty of illegal search, he may be personally liable for damages under state and federal laws for a tortious violation of the privacy of the student, although the damage suffered would be light or nonexistent in most cases. However, this conduct of the teacher may be cause for dismissal. On legally based evidence, the author advised school personnel to inform the student of his right to remain silent when questioned about his participation in a suspected crime. To be on safe constitutional grounds, school personnel should not infer guilt from silence of a questioned student and should not punish him for being uncooperative, if being cooperative means confessing a crime or serious breach of conduct.

Teacher liability was treated comprehensively by the Research Division of the NEA (1963b) and published by the National Commission on Safety of school operation and pointed up practices of safe operation. It indicated that school personnel will be held liable and legally responsible for a negligent performance of duties when pupils are injured.

Teacher Responsibility in Corporal Punishment

Corporal punishment is closely related to teacher liability since liability may result from the unreasonable application of physical force in punishment of pupils. There are, however, other aspects of corporal punishment justifying a separate treatment.

Nelson (1965) investigated the right of a teacher to administer corporal punishment to a student. From an extensive analysis of cases dating back to England and from present statutory provisions, the author concluded that, subject to such limitations and prohibitions as may be laid out by statute, the teacher may use corporal punishment as well as other forms of punishment for the purpose of enforcing reasonable discipline. Such punishment must be reasonable and not excessive or malicious and must be administered in the proper manner. In the use of corporal punishment, the teacher is conditionally immune. The immunity depends on the reasonableness of the punishment, the condition of the pupil, and the motive of the teacher. The majority of states do not have statutes governing corporal punishment. Nelson's general conclusions were in essential agreement with the analysis by the NEA Research Division (1964b) of all states which expressly allow corporal punishment.

James (1963) considered many aspects of corporal punishment in the public schools. His Chapter 3, particularly helpful in defining the legal status of corporal punishment, sets forth the laws of the individual states

and court decisions by states. The study concluded that "the attitude of the American people . . . is well reflected in the laws, decisions of the courts, interpretations by legal authorities, and statements of policies by governing bodies."

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CHAPTER VIII

The Economic Status of Teachers

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The economic status of the American teacher is frequently blamed for much of the current turmoil among teacher groups in different areas of the country. Research has thus far demonstrated, however, that the teacher's economic status is but one of the factors responsible for increased teacher unrest.

This article has been divided into four major units: teacher salaries, nonsalary economic benefits, teacher dissatisfaction and collective action, and suggestions for future research.

Teacher Salaries

The economic status of teachers is annually discussed in a large number of informational reports prepared and published by state and national teacher organizations. The NEA Research Division's annual reports of salaries and salary schedules have become much more detailed, including recent reports on administrative salaries (1965b), on 1965-66 teacher salaries (1966a), on professional growth requirements (1966b), and a new analysis of 1965-66 schedules which is based on a series of 12 "tests" (1965a) of schedule adequacy relating to both dollar values and structural elements.

The U.S. Bureau of Labor Statistics (1966) released a compilation of previously published materials which provided a composite report on teachers' salaries from 1925 to 1961 in cities of 50,000 or more population, and from 1925 to 1965 in cities of 100,000 or more. An article by the College Placement Council's Salary Survey Committee (1966) provided a well-written explanation of the history, nature, and scope of the Council's annual survey of beginning salaries offered college graduates.

A review of the literature shows a clustering of salary research in the areas of teacher turnover, merit rating, and discrimination in the hiring and assignment of teachers. Additional general studies are discussed at the end of this section.

Teacher Turnover

A number of recent studies related to teacher turnover show that economic conditions are generally a significant factor in teacher decisions

* Appreciation is expressed to Dr. Arvid J. Burke for his critical evaluation and overall direction in the preparation of this article.

to leave the profession or to transfer to another district. Blaser's (1965) study of the status of University of Idaho male teacher graduates (1951-60) showed that those withdrawing from the profession placed economic factors above other reasons for their leaving teaching. Three of his six conclusions related to the need for the correction of economic factors: two of these involved improvements in salaries and the makeup of salary schedules. In a U.S. Office of Education follow-up study, Hunter (1961) found that economic status had a definite impact on teacher retention. Forty percent of the beginning teachers at the lowest salary level were lost to their original districts compared with 25 percent at the highest salary level. However, the study revealed that higher salaries were more effective in reducing teacher loss to an individual district than to the profession and that men were more likely than women to leave the profession for salary reasons. Men who left the profession increased their earnings almost twice as much as those who remained.

Todd (1965), in a study of reasons for the withdrawal of Tennessee business teachers, found that economic factors, especially those related to salary considerations, were most influential. However, he also found that the professional characteristics and general attitudes of those who left differed substantially from those who stayed. On the other hand, Strickland (1962) found that salaries were ranked seventh among the factors reported as reducing the morale of teachers in white schools in North Carolina. Strickland's study was based on a questionnaire sample of 2,799 teachers.

Mori (1966) surveyed the motivational effects of attitudes of prospective teachers relative to the occupational values of teaching. He found that favorable attitudes toward the economic, interpersonal, and ethical values of teaching provided positive motivations. "Salary of a teacher" proved to be one of the 6 items (from a list of 26) most effective in motivating toward (or away from) a teaching career.

Higher education studies by Brown (1965), Cammack (1964), and Marshall (1961) show that both salary and other factors are significant in the retention of college faculty members. In a study of the mobility of faculty members at Michigan State University, Cammack found that faculty members who left voluntarily had higher mean salaries after a time interval of 10 years. The findings of Marshall and Brown suggest that salary considerations, work conditions, dissatisfaction with administration and location, research opportunities, and considerations of prestige are all important factors in the decisions of faculty members to stay or to leave. A study by Collison (1962) of British university practices provides an interesting contrast. He found that there was virtually no within-grade movement between British universities and that only 25 percent of British university faculties were at the three highest grades (professor, reader, and senior lecturer).

Additional References: Fusco (1964); Metz (1962).

Merit Rating

Problems previously reported relative to attempts to differentiate between salaries of individual teachers on the basis of quality of service persist in spite of continuing efforts to develop improved techniques of teacher evaluation.

The North Carolina State Department of Public Instruction (1965) reported on a four-year experimental study conducted by legislative mandate and at the state's expense. The researchers concluded that a statewide merit pay plan was neither practicable nor feasible, but did suggest that local merit salary programs might be feasible in school systems which met a number of qualifications, most of which paralleled those developed in earlier studies.

Link (1965), viewing the problems of teacher evaluation from the supervisor's point of view, stated that a basic knowledge of who should teach and what teachers do that produces learning was needed before attempts are made to assign values and rewards in teaching. She concluded that most present rating systems tend to have adverse effects on teacher-supervisor relationships and were of little value in improving instruction. Fattu (1963), after reviewing significant studies of teacher effectiveness, likewise concluded that no absolute set for teacher rating was yet available. Anderson and Hunka (1963) suggested as a possible solution to the problem of evaluator inconsistency the development of a second matrix designed to indicate the evaluator's "perceptual space" so that allowances may be made therefor.

On a more limited level, Johnson (1963) found that teacher attitudes toward the West Hartford Career Salary Plan steadily declined, although they had been initially receptive. He, too, concluded that a reliable method of teacher evaluation was essential if teachers' salaries were to be differentiated on the basis of quality of service. Burch's (1964) study revealed that West Hartford ratings for teachers in his study had no relationship to the standardized test achievement of their pupils.

Additional References: Brighton and Hannan (1962); McPhail (1963); Steffensen (1962).

Discriminatory Employment Practices

Increasing attention is being given to teachers whose economic status is affected by various types of discriminatory employment practices. However, recent research studies are largely concerned with attempts to determine the extent of the problem. Better (1966) analyzed the employment patterns of 1,065 students at the University of California at Los Angeles who sought their initial teaching positions during the period from 1954-55 to 1958-59. He found that applicants who were either over age 40 or Negro were discriminated against in their attempts to find educational employment.

The best compilation of data on displacement of Negro teachers following pupil school desegregation in the South is found in the report by the NEA Commission on Professional Rights and Responsibilities (1965). One of the study's major findings was that integration of school faculties in 17 Southern and border states had rarely kept pace with desegregation of student bodies. Similar findings were reported by the *Michigan Law Review* (1966) in a summary of court decisions and other legal provisions dealing with the selection and assignment of teachers.

In a general examination of teacher mobility in New York City, Griffiths and others (1963) studied the racial distribution of teachers in the city. They found no city district without Negro staff members, but reported evidence suggesting that Negro staff members were less mobile than others, "geographically among the districts and hierarchically up the system's promotional ladder."

General Studies

Bowen's (1964) economic study of British university practices suggests the value of intraschedule analysis of teacher economic status. After studying British university salary patterns in the arts, science, and technology, he reported that science was better off in terms of promotional opportunities and that salaries in science and technology were 10 percent higher than in the arts. He concluded that the official British university practice of uniformity in salary and promotional benefits is often circumvented to meet the needs of particular disciplines.

One of the most interesting pieces of recent salary research is that conducted by Friedman (1964) as part of a doctoral dissertation study at Columbia. She developed an economic human capital analysis based on lifetime earnings to demonstrate that the \$400 and \$800 salary differentials provided by the New York City school system in 1961-62 for teachers with a fifth year and sixth year of preparation, respectively, discriminated against teachers who entered the system with this preparation—as compared with those who acquired it on the job. Since New York City teachers may acquire additional credit hours in special tuition-free courses conducted after school and in the summer, Friedman's results are not necessarily transferable to other school systems. However, her results deserve serious consideration and suggest the desirability of more research in this area.

An analysis by Templeton (1963) sheds light on the reliability of comparisons based on the percent of a school district's current expense budget allocated for teachers' salaries. He studied the effect of a 1961 California law which attempted to lower class size and increase teachers' salaries by requiring school districts to spend a specified minimum percent of their current budgets (from 50 to 60 percent) for teachers' salaries. He found that districts with low pupil-teacher ratios actually were more

affected by the legislation than those with higher ratios. Also, districts with above average teachers' salaries were more affected than those with below average salaries.

Sackley (1966) found that the pay of urban teachers lost ground relative to many other occupational groups, including professional workers, in the period 1961 to 1965. He noted also that since World War II, teachers' supplementary benefits have also failed to keep up with the gains of other workers.

Additional References: Tickton (1961); Tucker (1965).

Nonsalary Economic Benefits

The most significant research in the general area of nonsalary economic benefits for public school personnel was Wilson's (1961) study of employer costs. In his sample of metropolitan school systems, fringe benefit costs equaled 13.1 percent of the average professional salary. Approximately 85 percent of such costs were for retirement. He found a wide range in the benefits offered, with much variation in the mean expenditure for them among the states represented. Fringe benefit costs tended to increase as current expenditures per pupil increased.

Retirement continues to be the major item in the nonsalary package: where available, sick leave and group insurance tend to rank second and third, respectively. The NEA Research Division has issued information reports in all three major nonsalary benefit areas during the past two years. Reports in these areas have never been published on a regular cycle. Group insurance provisions formerly were reported in their periodic Personnel Practice reports. Kleinmann's (1962) summary of the various nonsalary benefits provided in teaching and nonteaching fields serves as a basic reference source for researchers unfamiliar with the materials available in the various fields.

Rubin (1965) reviewed the 1963 Advisory Commission on Intergovernmental Relations' study on the transferability of public employee retirement credits. After a survey of governmental units representative of the various major categories, he recommended a further study of the financial and social consequences of employees' failure to use existing vesting privileges and a search for ways of preventing voluntary surrender of retirement rights.

An increasing interest on the part of government jurisdictions in the Carnegie Foundation's privately operated Teachers Insurance and Annuity Association (TIAA) pension provisions for higher education makes Schlach's (1963) historical study particularly pertinent. His description of the 1905 founding of TIAA and the subsequent fight for state university inclusion helps emphasize the importance of adequate employee pensions. Stright's (1966) survey of 285 higher education institutions

showed that a fifth of the state colleges and half the state universities now supplement state retirement benefits with TIAA.

Rodgers' (1964) study of retired teachers in Ohio showed an inverse relationship between time since retirement and such factors as salary at retirement, retirement benefit, and opinion as to adequacy of retirement benefit. While inadequate retirement income did not curtail necessities for the respondents, sacrifices of travel, insurance, magazines, and recreational activities were reported.

Additional References: NEA Research Division (1966a, b): NEA Research Division and AASA (1965).

Teacher Dissatisfaction and Collective Action

In recent years American teachers have made concerted drives to gain the right to negotiate collectively with boards of education. Investigators have examined the structure and membership characteristics of the two principal types of teacher organizations and have tried to discern some of the factors responsible for teacher unrest. The authors of two recent books—Lieberman and Moskow (1966) and Stinnett, Kleinmann, and Ware (1966)—designated 1960 as the beginning of the movement toward teacher collective action.

Factors in Teacher Unrest

Many hypotheses have been advanced on the reasons for the growth of teacher unrest and the evolution of the teacher collective action movement. Lieberman and Moskow (1966) attributed the movement to the impact of the concerted effort of the American Federation of Teachers in New York City. Stinnett, Kleinmann, and Ware (1966) stated that the movement began before the New York City turmoil but conceded that the new developments gave impetus to teacher aspirations. Major "causal factors" identified by these authors include (a) teacher impatience with economic injustices, (b) society's neglect of the schools, (c) the bigness of school districts (with the resultant loss of teacher identity), and (d) the organizational impact of the civil rights movement. Taylor (1966) theorized that teachers were organizing in many urban centers because of "a centralization of administrative control" and "a diminution of the opportunities for teachers to participate in policy making." He also stated that teacher frustrations have been compounded by low salaries.

In a sociological analysis of the relationship between economic and noneconomic factors in teacher unrest, Presthus (1962) found that the atypical pattern of accommodation to all big organizations is one of indifference or withdrawal. Thus, persons who come into an organization with great expectations are alienated when bureaucratic and personal

limitations blunt their hopes. Persons who accommodate to large organizations by adopting this pattern of indifference tend to separate work from "personal experiences" and to regard the pay check as the part of work that counts. Among college faculty members, Presthus found evidence of heightened faculty alienation because both status and economic reward went to the rapidly expanding administrative group.

Studies by Rudd and Wiseman (1962) and by Jones (1963) illustrate that an analysis of individual differences is helpful in illuminating the reasons for increased teacher unrest. The first study is a carefully balanced, extremely well-written analysis by two professors from the University of Manchester School of Education after a detailed follow-up of 1955 college graduates still teaching in 1960. Rudd and Wiseman found a significant difference in the sources of dissatisfaction of men and women. For example, teachers' salaries were a source of dissatisfaction to 28 percent of the men, but to less than 5 percent of the women. Large classes were a source of dissatisfaction to 17 percent of the women, but to less than 5 percent of the men. Jones found, from a careful analysis of the social origins of high school teachers in Hamilton, Ontario, that teaching was becoming increasingly more accessible to persons of lower social origin. In his sample, he also discovered that the greater proportion of men was found among teachers of lowest social origin while the greater proportion of women was found among teachers of highest social origin.

Additional Reference: Kite (1961).

Teacher Organizations

Several recent studies have examined differences between teachers who tend to favor the NEA and those who tend to favor the American Federation of Teachers (AFT).

Browder (1965) analyzed the AFT on the basis of a theoretical approach and the results of a random sample of 150 union members. He concluded that the ideology developed and espoused by teachers unions was heavily economic in orientation and that the primary ostensible aim of professional organizations was to serve their clients (i.e., the children). Browder's random sample of AFT members showed that 64 percent of their fathers had not graduated from high school and that 58 percent were blue-collar workers. His findings suggested that when the union organization looked out for its members' interests in terms of local salary, welfare, and working conditions, members found the structure and functioning of the organization satisfying to their needs.

On the basis of a study of 77 teachers in a large technical-vocational high school, Collins (1965) concluded that nonunion teachers had higher morale with respect to teacher salary, teacher status, and curriculum issues. He found no significant difference in morale with respect to rapport with principal, community support of education, and community pressures.

He also reported that women tended to have higher morale regardless of organizational affiliation.

A questionnaire study of teachers and administrators from five districts led Clark (1965) to conclude that teachers belonging to the NEA tended to be more satisfied with the teaching profession than those belonging to the AFT. Both teachers and administrators in his study group agreed that NEA was more concerned with professional standards and the broad area of education, while the AFT was more concerned with teachers' salaries and working conditions.

Suggestions for Future Research

Throughout social science research, an interdisciplinary approach appears to be of increasing importance. During the coming years, researchers studying teacher economic status may want to make increased use of the techniques of economic analysis of income (used by Friedman, 1964), sociological constructs of organizational operation (cited by Browder, 1965), and the interpersonal theory of psychiatry (used by Presthus, 1962).

In addition, it might be useful for an educational researcher to view the current tensions between faculty and administration in terms of the theory of "power equalization," sometimes described as a reduction in the power and status differential between supervisors and subordinates. Strauss (1963) pointed out that power equalization advocates say large-scale organization blocks individual growth and self-development and leads to apathy, lessened individual growth, and dysfunctional activities. Others maintain that gains from the various forms of power equalization (consultation, delegation, and participation) must be weighed against increased communication costs and the problem of decisions made at the wrong point.

More research is needed on the relationship between teacher economic status and teacher supply. As recently as 1964, Stewart predicted that the 1961-65 school year would represent a peak in the demand for teachers and that the number of teachers needed in succeeding years would be below peak level. One of the assumptions on which her prediction was based was that teaching salaries would maintain their present position relative to those of other occupations.

In addition, better comparative statistics on salaries, pensions, and other fringe benefits of teachers and public employees are needed along with a valid system for comparing prevailing economic levels and practices in the private sector.

In view of the civil rights focus of the present era, educational researchers should not neglect the economic status of teachers belonging to minority groups. The general absence of tenure laws in the South and the effect of school desegregation on faculty displacement might be topics of particular concern.

Finally, the whole area of increased teacher unrest and the drive toward teacher collective action offers many different opportunities for future research.

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CHAPTER IX

Staff Utilization

BRUCE R. JOYCE

Research in any area which does not come directly under the purview of one of the well-established academic disciplines is likely to develop awkwardly. Staff utilization is such an area. Innovations in staff utilization patterns are developed out of the problems of practice rather than out of the theoretical constructs of the basic disciplines, and, furthermore, we are only just beginning to see changes in uses of personnel derived from broad, theoretically based conceptions of man-machine systems. It is quite difficult, therefore, to compare the quality and type of work done on staff utilization with that done, for instance, in learning theory, which is an area of cumulative theoretical inquiry and which has the benefit of many psychologists, sociologists, and educators who have had much training in the design and execution of research projects. Consequently, existing research on staff utilization can be interpreted with respect to its context only—the developments in technology and organizational patterns in public school settings—and these need to be explored briefly before the research is examined.

The 1950's and 1960's have been a time when the conception of staffing the schools with only one kind of person (the multipurpose classroom teacher) and only one kind of material (textbooks and trade books) has been replaced with the view of the school as a complex of man-machine systems in which teachers of many kinds work with technicians and lower-order personnel of many qualities and in a matrix of technological devices and instructional resource centers. The work by Loughary (1966) exemplifies this. A massive effort has been going on to induce schools to experiment with new uses of physical facilities, personnel, and technological devices. In architecture, led by Educational Facilities Laboratories (1965), the concepts of flexible and creative use of space and of zoning schools for various functions (independent study, computer-assisted instruction, large-group instruction and seminars, etc.) have become well established. Team teaching has been made a familiar term by innovators like Anderson (1966), and the potential uses of television, computers, programmed instruction, and other instructional modes are well known even to the lay public. However, the local school setting is often highly resistant to change, affecting adversely the conduct of research in any area which, like staff utilization, has to be carried on in the school setting. To start a program of research on team teaching or the role of the teacher as part of

a man-machine system is extremely difficult. Without substantial financial support from a foundation or the government, it is often impossible to create the desired experimental conditions in the first place, or to keep them going until the teachers have had time to learn the new roles that are to be studied. Without intensive collaboration with a university or research and development center, it is difficult to assemble a qualified research team. Even university and school district collaboration provide no guarantee that research will be done.

Resistance to change has frequently forced research personnel into a defensive posture. For example, researchers exploring team teaching have needed to collect evidence about any possible emotional damage that might occur when the young child is exposed to more than one teacher (see Gibb and Matala, 1962, and Lambert, Goodwin, and Wiersma, 1965) because advocates of the self-contained classroom have attacked innovations in team teaching with allegations that emotional damage might occur. It will be difficult to carry on much fact-finding activity until heated arguments about the use of paraprofessionals, teaching teams, programed instruction, television, and computer-assisted instruction diminish greatly. The pressure from critics of innovations often forces innovators to proceed too quickly to assess the effects of utilization patterns on pupil achievement, whereas the first few years of a new utilization pattern should probably be given to "engineering" research that can result in knowledge of the optimal dynamics of the utilization pattern. For example, when paraprofessionals are introduced into a school system (or television or any other device requiring reorganization), the tendency has been to study immediate effect on pupils rather than how the paraprofessionals or media were actually used and how they might be used efficiently.

Two other problems affecting field research in the utilization of instructional personnel need to be recognized. The first is that patterns of staff utilization depend on administrative recognition that new roles exist. And, although the literature now abounds with ideas ranging from teaching with teams and the use of paraprofessionals to the development of man-machine systems, school personnel administration does not reflect these changes. For instance, Gibson and Hunt's (1965) recent book on school personnel administration shows only five instructional service positions including the teacher, guidance counselor, psychologist, nurse, and helping teacher. There is no recognition given to other instructional personnel, such as television specialists, programmers, team coordinators, or instructional systems specialists. On the other hand, 16 service personnel, such as secretaries, clerks, and dentists, and 18 administrative service positions are mentioned in this same volume. Until the personnel administrators see a greater variety of types of instructional personnel, the newer types are unlikely to appear in the school setting in any great number. The other problem is that "systems" thinking has come slowly to the area of public education. Innovations such as team teaching or programed instruction

often appear in local setting without the development of a full-scale pattern of organization that can enable these changes to be made or studied effectively. When introduction of a staff utilization pattern is conceived as the construction of a man-machine system, however, careful analysis of the possible behavior of the machine and people can be made in an effort to find out the actual situation of staff utilization of roles that teachers take on easily and the kind which they resist. For example, team teaching involves new kinds of leadership problems which have been debated vehemently (e.g., whether to have "hierarchical" teams), but the actual patterns of interaction of team members and the question of their efficiency in decision making has been studied very little, considering the amount of team teaching that is going on.

Despite the difficulties in the context of staff utilization there have been many studies reported even since Anderson's (1964) review. Progress can be discerned on three fronts: (a) through research which is done in the context of attempts to change staff utilization patterns in the public schools or to make technological innovations that require new staff roles, (b) through studies of teaching which are beginning to provide a more realistic idea of the potential functions of the teacher, and (c) through the development of conceptual frameworks for determining staff utilization patterns through the construction of comprehensive man-machine systems. In this chapter, each of the above three areas is treated separately, but the categories overlap somewhat.

Innovations in Staff Utilization Patterns

Team Teaching

The great push, especially at the secondary school level, to persuade schools to organize themselves into teaching teams and to make use of what have come to be called paraprofessional or subprofessional operatives on the teaching team has not resulted in much solid research. The Ford Foundation collaborated with the NEA Department of Secondary School Principals to initiate, to study, and to give publicity to projects at the secondary education level. Several numbers of the *Bulletin of the National Association of Secondary School Principals* were devoted to this problem and have been reviewed by Anderson (1964, 1966). The January 1965 issue of the *National Elementary Principal* is a guide to this attempt at the elementary level. Anderson (1966) and Hillson (1965) provided bibliographical guides through summer 1966. Nearly all of the "research" that has accompanied this movement has been descriptive and subjective, but that product was not unexpected. As indicated above, the people who have conducted such studies were concerned with bringing about an innovation and either guarding against gross damage to children during the innova-

tions or fending off critics. Few were attempting to develop lines of cumulative research. Four or five studies, however, were very carefully done and should stand as examples for the future development of the field.

One of the better studies was done by Lambert, Goodwin, and Wiersma (1965). Although it examined the operation of only two teams, the number of variables studied was large, and they were clearly identified. The investigation was constructed to yield much information about the processes of the team operations and factors influencing efficiency of operation. The dynamics of the much debated hierarchical team structure were investigated in terms of the content of instruction, pupil interaction, adjustment, and achievement. Some of the findings have immediate implications for team organization. Within the teams, discipline problems were greatest when intern teachers were teaching. Apparently the team operation, which is frequently touted as a good setting for student teachers and interns, did not automatically protect the novice teachers from control difficulties, leading one to wonder whether the children perceived the "team" as their teachers or whether they related to their teachers singly. Since one of the potential advantages of team teaching is that it enables teachers to have a collective or group effect on students, it seems that ways of bringing about this collective effect might well be studied closely. The primary grade team pupils surpassed their self-contained classroom counterparts in achievement, while the pupils with the intermediate team did not. The stability of the primary team personnel was greater. Pupils on both teams had minimal problems adjusting to the team organization, even in the case of the changing personnel on the intermediate team.

Lambert, Goodwin, and Wiersma (1965) used a number of research techniques which could easily be employed more frequently in field settings: (a) pupils were randomly assigned to team and self-contained settings, (b) observers were trained to record infractions of discipline, and (c) the interaction analysis technique was employed to permit the study of such issues as the effects of team stability on the interactions with children. (For example, the unstable team was found to spend much less time on content than did either the primary team or the teachers of self-contained classrooms.) Although the small sample limits the generality of findings, this study indicates the value of intensive study of many interacting aspects of any staff utilization pattern, and it gives rise to many questions for extensive research both about ways the dynamics of team operations may affect pupil output and ways of improving efficiency in cooperative teaching. For example, if team efficiency does turn out to be closely related to team stability, which seems logical in any event, it is possible that the kinds of team teaching now being employed are not well suited to the school settings where teacher turnover is very high.

The Norwalk Board of Education (1963) commissioned Heathers to examine its team teaching program. Although Heathers worked under severe design handicaps (his chief source of data was written reports by

team members), he asked critical questions of the data, and some of the results are important for students of the dynamics of team teaching. Norwalk is an established center of team teaching and had over 25 teams in operation during the year of Heathers' study: foundations and university consultants have provided unusual financial and technical support to the teams. Heathers found that 90 percent of the lessons taught within the team structure were planned by individual teachers working alone. Also, most of the topics discussed by teams during their planning sessions related to coordination of personnel and organization of resources, although teams reported that they set up overall plans under which individuals operated. These results are mixed and ambiguous enough to suggest that hard data are needed regarding how plans are made by teaching teams. If, for example, a team spends very much time reallocating individual responsibilities and if much planning and teaching is done by individuals, potential gains accruing to cooperative teaching may fail to develop. The Norwalk study also reported that most small-group instruction occurred in the curriculum areas of reading and arithmetic, which are the areas of instruction where small-group instruction occurs in other types of staff organizations. There were many other aspects of Heathers' study for Norwalk which should stimulate investigators to look closely at the actual patterns that develop when teams are formed and to conduct engineering research to improve team functioning. Many of the techniques employed in industrial psychology for describing and analyzing staff performance could be applied successfully to investigate staff utilization practices in schools.

Reber's (1965) survey in 1963 and 1964 addressed itself to the "persistence tendencies" of staff utilization projects sponsored by the Ford Foundation and the NEA Department of Secondary School Principals. This survey included 51 schools, of which 17 had been involved in staff utilization projects that were publicized during the late 1950's. The schools in the innovation projects manifested a much higher use of innovations of all types, including the use of mechanical and electronic equipment, independent study time for pupils, and the use of instructional assistance, team teaching, and large-group instruction. They indicated that 28 out of 35 staff utilization projects are continuing and that 7 have been terminated. The ones that were terminated formed no particular pattern. The ones that continued included team teaching projects, the use of mechanical or electronic equipment, the use of lay assistance, and the use of independent study time organizational forms. A much larger percentage of the staff utilization project schools developed innovations in team teaching; lay assistance tended to be used in school libraries and lay readers in English classes. The survey indicated that most of the schools were unable to develop evaluation procedures that would produce reliable evidence of the results of the experimentation or, perhaps more important, of the difficulties and problems encountered in developing and carrying through the experimentation. Reber's study, while presenting a valuable survey of the use of

staff in selected school districts, was not really designed to yield much evidence on the factors influencing the persistence of specific practices.

Fifteen years of innovation in team teaching have left us with almost no research evidence. Aside from the Lambert, Goodwin, and Wiersma (1965) study, there is little evidence of the effects of mixing people of different teaching styles on various teams. The use of teams to develop social climates in the teaching situation that will have a calculated effect on children is not particularly well-known. Most of the research on the use of paraprofessionals on teams has been defensive research aimed at working out minimal roles for such personnel and proving that they do not harm the children who are exposed to them. Since the early 1950's, knowledge about the use of paraprofessionals has really not increased as a consequence of a carefully done research project. Throughout the nation, once schools attempt to develop team-teaching patterns or work out ways of using paraprofessionals on teams, they cannot turn to accumulative research literature on the subject. Hence, they turn to the persons on school of education staffs who are mechanics of school organization, persons who have a clinical expertise that they can apply toward helping the district solve its problems. Some of the important first questions in the study of team teaching have not been studied carefully: What changes in educational environment actually take place when groups of teachers work together? Is content worked at a better level as a result of cooperative teaching? Can teams use their differences in personality and teaching styles in such a way as to capitalize on differences in children's personalities and learning styles? Theoretically, a team of people working together should be able to create a quite potent social climate. How can this be done? Is a team better able to handle individual differences among children than are single teachers working alone or certain kinds of man-machine systems?

Another kind of question that needs investigation is why so many teachers and theoreticians in education resist hierarchical structures in teams. The notion that all teachers should enjoy the same professional status has persisted in education for many years. Even where schools are unable to staff themselves with certificated personnel, as in the big cities, they tend to give permanent substitutes and other temporary personnel the same responsibilities and duties as they do experienced teachers who have been carefully trained and are scholars of their subjects. It is important to study the question of how one enters into a society of teachers, most of whom believe they should work alone and have equal status. This is a critical question not only with respect to team teaching but with respect to any innovations in education that require changes in staff roles. It has been exceedingly difficult to intrude innovations into the school culture in such a way that they will make a difference. What is the nature of this teacher culture? What can be done to make innovation an experimental process rather than a continual battle against the resistance from the society of teachers? The study by Soles (1964) provides a beginning in this area.

Technically speaking, many improvements could be made in the study of team teaching. Many of the techniques used to study military teams should provide some useful networks for examining team behavior. The work by Glanzer (1962) has laid a basis for looking at levels of organization and integration. Halpin and Croft (1963) opened up a way of looking at organizational study climates that can be applied both to the settings in which team teaching takes place and to the operations of the teams. Both the constructs and the methodology developed by Halpin and Croft should be easily modifiable to apply them to the study of cooperative teaching. Information-processing models can very fruitfully move attention away from such questions as whether teams should be used or whether paraprofessionals should be included and move more toward studies of effects on the information flow in the classroom. Little is known about ways of affecting information flow or about training individuals for specific tasks or for roles that increase efficiency. Cybernetic models, which depict supervisors and subordinate personnel as interacting, self-regulating systems, can open up very different types of studies not only of team teaching but of teacher activity in all types of settings. It is particularly important that solid analytic schemes, such as those developed from the cybernetic point of view, be employed in school settings so that the experience of innovators not be lost to the future. For example, Joyce and Harootunian (1967) described a variety of teacher roles which were developed at the Valley Winds school in Riverview Gardens, Missouri, but which were never studied adequately and are now passing from the scene with no addition to the cumulative literature. So far even the expensive Franklin School project reported by Bair and Woodward (1964) has added little to cumulative knowledge although it has been widely imitated and has had great stimulus value.

Man-Machine Systems

As Anderson (1964) pointed out, the research on programed instruction, televised instruction, and computer-based instruction has gradually shifted from studies comparing these means of instruction with other methods to "engineering" studies concerning ways of improving the use of machines and media and integrating them with the use of teachers who are in direct contact with children. Sometimes studies of the use of media simply vary conditions of staff use and compare the achievement of students. For example, Bartz and Darby (1966) investigated the achievement of students using programed and nonprogramed texts under varying degrees of independent study, thus varying instructor roles. One condition required regular attendance at class meetings with lecturers and examinations. A second condition required class attendance and examination once a week. The third condition did not require class attendance or weekly visits with the instructor or examinations. Students under all three conditions took the final exami-

nation. Some students under each condition used programed texts and conventional texts. Most test scores indicated that the condition 1 students exceeded condition 2 students and conditions 1 and 2 students exceeded condition 3 students. Also, students using the programed text under all conditions scored significantly lower than students using a conventional text. This study is unusual in its thoroughness, and it raises many questions which are worth future study. It suggests empirically what has long been suggested logically: that is, that instructional devices should be part of carefully planned man-machine systems. To replace the instructor with a programed text without respect to the motivation of the student or to require varying degrees of independent study without respect to the training of the students to play their new roles seems as unsupported by research as it is by common sense. The introduction of programed texts and television instruction requires the development of appropriate staff roles to fulfill functions not usually provided for through the usual roles of the lecturer.

Moskowitz' (1964) study also points up the desirability of making technological changes in the context of a conception of appropriate roles for man and technology. In an earlier study she had found that elementary school students studying foreign languages by means of educational television had developed negative attitudes toward foreign language, whereas "live" classroom instruction resulted in positive attitudes. The 1964 study utilized different patterns of live teachers in conjunction with televised instruction. One group continued a television study of French three times a week and also was given Spanish lessons from a live teacher. Another group received the televised instruction followed by lessons from the classroom teacher. The third group took the French instruction by television and the Spanish from a live language teacher. A fourth group received no language instruction. Data from the study suggested that the form the initial language instruction takes is very important. Especially, the use of the live teacher in the early parts of instruction seemed to be desirable. No doubt successive items of research will reveal the kind of "mix" that is desirable between the use of the live teacher and televised instruction. This study is also noteworthy in that it includes not only student achievement, but also student attitudes toward what they are learning. Surely much research will be needed to determine how to utilize instructional staff so as to increase the likelihood of positive student attitudes.

Guba and Snyder's (1965) questionnaire study was a carefully designed, direct attempt to explore the relation between television and the classroom teacher. Studying 332 teachers who were using instructional television in their classrooms and 275 who were not, they sought to discover differences in instructional behavior and in attitudes toward new instructional media, in patterns of utilization, and in patterns according to expectations. They found that nonusers seemed to hold a stereotyped image of the television teacher as an "all-pervasive" preceptor of the classroom teacher, whereas users did not share this concept. In fact, they concluded that the role of the

teacher is actually little affected by the introduction of television. They pointed out that the conditions under which the television was available were frequently unfavorable, even in the much publicized and heavily supported Midwest Project for Airborne Television Instruction project, so that actual use patterns were considerably restricted when compared to what is possible. Guha and Snyder concluded also that the use of television was chiefly for "telling and showing," with the classroom teacher following up. Further, television was frequently seen as an interruption in the classroom. Fears of television apparently lessened as it was used, and the users were more favorable toward instructional television than were nonusers. Four of their observations have many implications for designers of man-media-machine systems: (a) classroom teachers were poorly prepared to use the media; (b) classroom teachers were not given enough in-service help; (c) schools were not well equipped to receive television in settings that facilitated efficient use; and, perhaps most significant, (d) production fell short of expectations, a condition likely to discourage imaginative use by the classroom teacher.

An investigation that should be seminal in the development of thinking about instructional systems was conducted by the Denver Public Schools and the Institute for Communications Research at Stanford University. A very large sample was used in a probe of the combination of television instruction, self-instructional programs, and human teachers in an integrated instructional system. This study has been reported in several places and is most easily recovered in Jacobs, Maier, and Stolurow (1966), who reported the outcomes of treatments using programs only, teachers only, and combinations of program and teacher. What makes the study especially illuminating is the inclusion of pupil inputs (achievement, aptitude, and attitude) in relation to treatments and the investigation of teacher attitude as it relates to the results of the treatments. Both teacher-taught and teacher-plus-program-taught groups performed better than groups receiving the program alone with the teachers utilized only as monitors. Pupil input did not interact with treatment as far as achievement outcome was concerned. Attitudes toward programed instruction were related to treatment, however, with teacher-taught classes having the least favorable attitudes. Also, the high-aptitude students seemed to like the teacher-program combination whereas low-aptitude students seemed to prefer the program-alone instruction. The investigation developed some intriguing ideas for staff utilization patterns that combine teacher attitude, teacher role, and type of student (e.g., assigning teachers who like conventional methods and low-aptitude students to conventional roles and teachers who like innovative methods and high-aptitude students to newer instructional roles). While actual use of patterns such as these is unlikely, the study illustrates the need to investigate the interaction of variables in man-machine engineering research. The importance of these findings, of course, is that they reinforce the necessity for including considerations of pupil characteristics

when constructing man-machine systems. Comprehensive instructional systems need to be based on differential treatment models, as suggested by Hunt (1966).

Additional References: Glaser (1962; 1965a, b); Hanson and Komoski (1965); Schramm (1964).

Computer-Assisted Instruction

Many observers feel that the information-processing load that is incurred by the need to monitor the progress of 20 or more learners working at their own pace is too great to be handled by the human teacher without computer assistance. Hence, there are now research and development projects such as those reported by Carter and Silberman (1965) to develop programmed instructional systems that utilize computers for monitoring progress and providing data on which to base decisions about the needs of students. The interpretations of the work mentioned earlier by Bartz and Darby (1966), Guba and Snyder (1965), Jacobs, Maier, and Stolurow (1966), and Moskowitz (1964) can probably be extended to apply to computer-assisted instruction as well. That is, staff utilization patterns will affect the functioning of the system, and it would be wise to investigate many man-machine combinations until patterns emerge on which theories can be constructed to guide system development.

Studies of Teacher Role

Another important ingredient in the staff-utilization picture is the capacity of the teacher to fulfill certain roles. The studies by Bellack and others (1965) indicated that the central "move" or maneuver by the classroom teacher is the *question*, directed at the student and usually requiring a convergent response. The interchanges of the classroom were likened to a game in which questions and answers alternated in cyclic patterns. Little is known about the capacity of teachers to control this "game" to create alternate instructional roles. Hughes (1963) reported that most teachers rare teacher used other roles. On the other hand, other investigators, e.g., Flanders (1963), have reported considerable flexibility in teacher behavior. Some teachers investigated by Flanders were invariably nonsupportive, and others were invariably very "direct" in their methods.

Decisions about the proper roles of human teachers, media, and machines will require much more complete research on the roles teachers actually fulfill and on their capacity to learn new roles and develop the flexibility to modify their behavior as teachers. The importance of research on this question cannot be overstressed at this juncture in history. For example, many educational theorists have advocated that teachers act as leaders of

cooperative inquiry, a role that, judging from the studies on teaching, very few teachers actually fulfill. Similarly, many educational theorists believe that teachers should be quite supportive and accepting of student behavior, another role that, judging again from the studies of teaching, very few teachers fulfill adequately. Especially, it would seem that those who are concerned with the creation of a humanizing school climate should study more completely their greatest potential for significant research—the human teacher. At present, in spite of an increase in the studies of teaching, there appear to be many more investigations of the capacity of the mechanical teaching devices than of the human teacher.

Interesting because of their careful and complex research designs and because they illustrate the importance of replication are two studies by Ginther (1963) and Payne (1961), who examined the achievement of children in science when science consultants worked only with teachers and when they worked with teachers and assumed an instructional role. In the first investigation Ginther reported that achievement was greater when the consultants worked directly with the teachers and did not assume the instructional role. In the second study, a replication of the first one, Payne reported that there was no difference between the two methods of using the consultants, although there was a difference in the achievement when the consultant himself was considered as a variable. In certain ways the two studies were not exactly alike, but they were sufficiently close that the findings must be considered contradictory. Their studies were no more theoretical than many others but represent salutary use of first-class research design technique in a study of staff utilization.

The methodologies of many of the studies on teaching (only a few mentioned here) could easily be applied to the analysis of team teaching and media utilization. The study by Lambert, Goodwin, and Wiersma (1965) is a rare application. A number of important questions (for example, the effect of team teaching on classroom discourse and the effect of mixed teaching styles) are susceptible to research if the methodology of the studies on teaching is employed.

The Development of Theory

Some of the recent research indicates that staff utilization problems are gradually being studied with greater precision and more sophisticated research designs than in earlier periods. The need in the future appears to be for simultaneous development of more simpleminded fact-finding research to explore just what happens when teachers are utilized in different ways and of more sophisticated constructs that can guide research and improve staff utilization. The studies of teaching described above are resulting in a methodology which permits a close look at the realities of the teaching-learning process. The development of adequate theoretical con-

structs has been hampered by diversity among educators. For example, many who have focused on the development of technology neglect the role of the human teacher and vice versa. However, useful constructs are gradually being developed, and applications to educational problems are also being made.

The application of cybernetic principles as suggested by Smith and Smith (1966) is a promising avenue for research on staff utilization. For example, regarding the classroom or school as an information flow system gives rise to many interesting questions about how to use staff to improve the flow of information and the function of students as self-regulating learners within the system. Cybernetic principles would almost surely generate research that would result in different patterns of staff use. For example, the secondary teacher's "ideal" load is frequently put at 100 students, an estimate arrived at by rule-of-thumb estimates of efficiency. If analyses were carried out, the 100:1 ratio would seem absurdly small in some cases and impossibly large in others.

Flexible scheduling plans, such as those proposed by Bush and Allen (1964), should generate research on staff utilization when man, machine, and open-ended instructional resources are considered together. Models of teaching such as Joyce and Harootunian (1967) have developed will give rise to research on staff utilization by differentiating classes of teacher activity that may require different combinations of teachers. Loughary's (1966) analysis of man-machine systems can have the effect of turning educators toward the development of more comprehensive instructional systems from which patterns of staff utilization can be projected and tested. From industrial psychology, also, concepts can be borrowed that should suggest profitable lines for inquiry. For example, Argyris (1964) has examined many aspects of the interaction between person and organization which, added to Halpin and Croft's (1963) applications to education, can provide a more thoroughgoing theory under which to examine that important aspect of staff utilization.

Despite the theoretical advances during the last five years, the challenge remains to build conceptions of staff utilization that will match the combination of human wisdom and technological grasp that characterized Buckminster Fuller's *Education Automation* (1962). Fuller's work should prove to be a cornucopia of ideas in this and other areas of educational concern.

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CHAPTER X

Methods and Concepts in Classroom Research

BRUCE J. BIDDLE

It is beyond the scope of this chapter to provide a detailed review of all empirical studies of classroom interaction. Excellent recent reviews have been provided by Kliebard (1966), Medley and Mitzel (1963), Weick (in press), and Withall (1960). Two additional reviews have also been prepared by the author and others (Biddle and Adams, in press b; Biddle, Fraser, and Jellison, 1965). Instead, this chapter deals with five specific problems of classroom research as they are handled in recent programs of investigation: coverage, methods of data collection, unit of analysis, conceptual posture, and concepts used. The reader is cautioned that this brief treatment must of necessity do some violence to the studies cited: for instance, no summary of findings is attempted.

Coverage

Given the complexity and high cost of classroom investigation, it is not surprising that most recent investigations have concentrated on a narrow range of classroom types. Various criteria may be used to specify the type of classroom with which particular investigations have been concerned: (a) grade level (Gump, 1967; Hughes, 1959; Meux and Smith, 1964; Nuthall and Lawrence, 1966; Smith and others, 1964; Taba, 1964; Levine, and Elzey, 1964); (b) subject matter (Bellack and others, 1963, 1965, 1966; Biddle and Adams, in press a; Flanders, 1960); (c) social class of pupils (Jackson, 1965; Perkins, 1965; Smith and Geoffrey, 1965); (d) pupil achievement (Perkins, 1965; Taba, Levine, and Elzey, 1964); and, finally, (e) pupil adjustment (Kounin, Friesen, and Norton, 1966).

Again, where various classroom structural conditions have been investigated as independent variables in recent studies, the range of variables studied has been limited. Studies have dealt with variations in age and sex of the teacher (Biddle and Adams, in press b), subject matter (Biddle and Adams, in press b; Flanders, 1960; Hughes, 1959), grade level (Biddle and Adams, in press b; Flanders, 1960; Hughes, 1959), teacher training and Adams, in press b), teaching style (Hughes, 1959), teacher training (Flanders, 1960; Taba, Levine, and Elzey, 1964; Waimon and Herman-owicz, 1965), nationality differences (Flanders, 1960), and phases of the school year (Smith and Geoffrey, 1965).

These evident limitations of both coverage and classroom variability have had several effects on the fruitfulness of recent classroom research.

First, many studies have appeared to be expressions of concepts, methods, and outlook unique to the particular type of classroom investigated. As an example, in the investigations of B. O. Smith and his associates and of Bellack and his associates, which are limited to secondary classrooms, there appears to be an assumption that most meaningful classroom interaction is verbal, an assumption that would be less valid at the elementary level. Second, results of the studies represent but a restricted range of classroom events. L. M. Smith and Geoffrey, alone among the investigators reviewed, dealt explicitly with the lower class school. Finally, the fact that at most only two or three structural variables are considered in the typical study restricts the possibility of discovering interaction effects. Biddle and Adams, for instance, reported that male and female teachers appear to generate different classroom phenomena and that the effects of the teacher's sex change with the age of the teacher. It is clear that any reasonably complete study of classroom phenomena should cover a wide variety of classroom conditions and variables.

Methods of Data Collection

Recent studies of the classroom have differed widely in methods of collecting data. Weick (in press) distinguished between two analytically separable processes—behavioral *recording* and *encoding*. Recording takes place when behavioral events are “frozen” into a permanent record, such as sound or visual recording. Encoding is the conversion of behavioral events or records into a form suitable for counting and tabulation. As we shall see, some classroom studies have employed neither recording nor encoding; some have employed encoding alone; and some have employed both processes.

Nonparticipant Observation

The broadest and simplest methodology used in classroom studies is that of nonparticipant observation, in which the behavioral scientist enters a new social system unobtrusively to take detailed, nonsystematic notes and to develop insights about the culture of the system. Recording, encoding, data analysis, and synthesis all take place in the mind of the nonparticipant observer. Thus, nonparticipant observation involves neither recording nor encoding in the formal, replicable sense. Since the observer's task is to develop insights, rather than to test hypotheses, nonparticipant observation is probably the best method for formulating new concepts and relationships; since it does not provide replicable results, it is a poor technique for testing hypotheses. Examples of nonparticipant observation in the classroom may be found in the works of Jackson (1965) and Smith and Geoffrey (1965).

Observer Rating

It is possible, of course, to place in the classroom an observer whose task is the systematic encoding of behavioral records. Studies using such techniques exhibit replicable methods of encoding but not recording. By far the majority of studies of classroom interaction have used various forms of observer rating and, following Medley and Mitzel (1963), we shall distinguish three varieties: postsession rating, sign observation, and categorical observation.

Postsession rating occurs when the behavioral observer is asked to delay behavioral encoding until after the class session is finished. Ratings are then made of various aspects of the class hour as a whole. Postsession rating procedures have, in fact, been used for many years by educational inspectors and teacher raters, with ambiguous results. The best example of the use of postsession rating in a research context is provided by the work of Ryans (1960). The postsession rating has grave defects for serious research; not only is the observer asked to integrate his impressions throughout the class hour for a single set of ratings, but the technique destroys all possibility of studying interactional processes during the class hour.

In sign observation, the observer is given a list of events to watch for in the classroom and is asked to check off those events which take place during a given period. An example of this is the OScAR technique developed by Medley and Mitzel (1958). Sign observation has the obvious advantage of anchorage: that is, observations are closely tied to concrete events, and observers are asked to make a minimum of high-level inferences. It suffers various defects, however, owing particularly to the fact that sign observation is tied to an arbitrary unit of time and cannot easily be adapted for the study of interaction. In addition, most useful lists of classroom signs are both extensive and, from the point of view of the observer, arbitrary.

Categorical observation occurs when the observer is provided with a list of categories or scales into which events are to be coded. Kowatrakul (1959) asked observers to place the behaviors of randomly chosen pupils into one of six predetermined categories; Flanders (1964) provided seven categories for classifying teacher behavior; Perkins (1964) used two categories for classifying teacher behavior and the observers in the classroom, one to categorize teacher behavior and the other to encode pupil behavior. Categorical observation is more abstract and more flexible than sign systems: categories may be applied to arbitrary time units, to selected events, or to naturally occurring event sequences, and they may also easily be used for the study of interaction (Flanders, 1964).

All forms of observer rating suffer a serious problem when used for classroom research—that of observer loading. Any given behavior observer can focus on only a fraction of the classroom events, e.g., can observe in detail only one or two classroom participants. Thus, all ob-

server rating techniques suffer both from limitation of content and from unreliability of the encoding process.

Behavioral Recording

Problems of content limitation and unreliability in the encoding process may be greatly reduced if observers work from a behavioral record rather than from ongoing classroom processes. Behavioral records may be scanned repeatedly for multiple coding: the complex or unclear event can be scrutinized in detail and coded with reliability. Various forms of behavioral recording have been used in classroom research.

Specimen records, developed by Barker and Wright (1955), are running narratives of everything that happens to an individual and of his responses to those events. Originally used for children's behavior, they now have been applied to teachers (Hughes, 1959); to camp counselors and campers (Gump and Kounin, 1960); to parents, teachers, and pupils (Barker, 1963); and to a holistic description of classrooms (Gump, 1967). Since specimen records are dictated by an observer physically present in the situation studied, they may reflect two sources of bias: (a) those observed may change their behavior because of the presence of the observer, and (b) the record dictated is filtered through the selective and integrative mechanisms of the human observer. The latter bias is more difficult to overcome, since all human beings tend to simplify, categorize, unify, and subjectively distort their impressions of events.

Sound recordings have also been used by a number of classroom investigators, including Bellack and others (1963, 1965, 1966), Nuthall and Lawrence (1966), Smith and others (1964), Taba, Levine, and Elzey (1964), and Waimon and Hermanowicz (1965). Although various means are available for making sound recordings, all of these studies used electronic tape recordings. The major mechanical problem reported was the high ambient noise level found in most classrooms; in some studies, intelligibility of the audio record was increased by hanging a microphone around the neck of the teacher. The greatest inherent difficulty with sound recordings is that they provide no information whatsoever about the visual or tactile stimuli of the classroom. It is not surprising to discover that most of the aforementioned studies dealt with classroom interaction at the secondary level, where visual and kinesthetic experiences are presumably of less prominence.

Visual recordings may also be made in the classroom. Gump (1967), for example, supplemented his specimen records with time-lapse photographs. Despite the richness of visual information, however, most investigators appear to have assumed that the bulk of classroom informational exchange is either auditory or supplementary to audio information and have not made isolated visual recordings.

Audiovisual recordings have been reported by several teams of investigators to date (e.g., Biddle and Adams, in press a; Kounin, Friesen, and

Norton, 1966; Schueler, Gold, and Mitzel, 1962). The team headed by Kounin used both 16mm sound motion pictures and videotape recordings, while the other two groups used videotapes only. Kounin, Friesen, and Norton and Biddle and Adams made recordings of intact classrooms with portable equipment and two cameras in order to display the faces of all participants. Biddle and Adams also used two sound channels in their recordings. The greatest difficulties reported in making audiovisual recordings were cost and the recurring problem of ambient noise in the average classroom.

It seems clear that audiovisual recordings are required for the serious, analytic study of classroom processes. Nonparticipant observation, however insightful, cannot lead to replicable data. Specimen record data are both biased and incomplete. Observer rating cannot generate a multifaceted behavioral record and hence is unable to make possible the study of relationships among the many processes taking place simultaneously in the classroom. Only the audiovisual recording preserves the richness of the classroom for subsequent explorations in behavioral encoding.

Unit of Analysis

The size of classroom events does not concern the participant observer; he is free to choose acts, act sequences, entire class hours, or whole semesters for his unit of analysis. The serious behavioral encoder, however, must specify a unit of analysis which will then be rated. Choice of the unit of analysis is both a methodological and a theoretical issue, and naturally classroom investigators have solved this problem in a number of ways.

Arbitrary Unit of Time

A number of investigators (Flanders, 1960; Kowatrakul, 1959; Medley and Mitzel, 1963) have used an arbitrary unit of time as a basis for their investigations. Flanders, for instance, asked observers to make a judgment every three seconds, while Medley and Mitzel asked that a record of signs be kept for three minutes. The advantage of the arbitrary time technique is its mechanical character, which facilitates the effort of an observer engaged in systematic observation. One difficulty with an arbitrary time unit is that it does not reflect classroom events per se. However long or short the unit chosen, classroom events may be operating at another rhythm, and encoding is different when the events "break" on or between the arbitrary unit boundaries. Another difficulty is that naturally occurring units are not only distinct from one another in time but also evidence an internal envelope: they have initiatory, consummatory, and closing phases. The only way to pick up such information is to study naturally occurring units directly.

Selected, Naturally Occurring Units

It is possible to confine one's attention in the classroom to units wherein the teacher is only lecturing, or to the study of interaction during seat work. Kounin, Friesen, and Norton (1966), for example, looked for and rated deviancy-control units, which occurred when the teacher identified and did something about a pupil whose performance was out of line. The difficulty with such procedures is that the occurrences rated form but a part of the ongoing stream of classroom events.

Analytic Units

Some units of classroom observation are suggested by the nature of the concepts used by the investigator. In the work of Smith and others (1964), for instance, an *episode* is "one or more exchanges that comprise a completed verbal transaction between two or more speakers." Such a unit is defined analytically provided that the investigators conceptualize it and provide rules for its identification. Analytic units may or may not be recognized as "natural" units of classroom discourse by participants; normally they are discussed in abstract terminology that has meaning mainly to the investigators.

Analytic units vary in size and reflect various conceptual assumptions. One comprehensive set of units is provided by investigators who have focused on direct exchanges between teachers and target pupils. The smallest of these units is the unit act, generally termed a *move*. A sequence of moves consisting of a set of exchanges between the teacher and an individual pupil on a single subject matter is called a *reciprocating episode* by Smith and others (1964). A somewhat longer sequence which may involve several target pupils is termed by Smith and others a *coordinate episode*, by Nuthall and Lawrence (1966) an *incident*, by Bellack and others (1965) a *teaching cycle*, and by Waimon and Herzig (1965) a *teaching episode*. Two still longer units are also suggested by Smith and others: the *strategy*, a set of verbal actions that serves to attain certain results and to guard against others, and the *venture*, a segment of discourse consisting of a set of utterances dealing with a single topic and having a single overarching content objective.

Since analytic units reflect the sophisticated concerns of the investigator rather than those of the participant, their use entails the risk of moving away from phenomenal reality and the problem of having to translate results into some convenient form usable by educators. And, since analytic units are clearly concerned with but one view of classroom interaction, to adopt a single analytic unit is to prejudice the outcome of using those units to test the adequacy of competing theories. To cite one example, Nuthall and Lawrence attempted to use the reciprocating episode unit to test learning theory hypotheses in the classroom—with little success.

Phenomenal Units

The two difficulties noted in analytic units are somewhat overcome by the use of phenomenal units. natural breaks in the stream of classroom processes that may reasonably be assumed to be recognized by classroom participants. The classic type of phenomenal unit was provided by Barker and Wright (1955) in their concept of *episode*, a unit of individual behavior which exhibited constant direction, normal behavior perspective, and approximately equal potency throughout its course. Since the episode is basically a unit of individual motivation, it is reasonable to presume phenomenal awareness of episodes on the part of the subject, and Barker and Wright exhibited enormous fecundity in suggesting aspects of behavioral episodes that can be reliably coded. Additional phenomenal units that have been coded from specimen records include environmental force units (Schoggen, 1963) and social contacts (Dyck, 1963). A somewhat different phenomenological unit has been proposed for classroom activity by Gump (1967) in the *segment*. Classroom segments are marked by the gross breaking points in daylong classroom activities, as when a teacher shifts subject matters, or when the collection of milk money is replaced by show and tell. Kounin, Friesen, and Norton (1966) used a similar phenomenal unit.

It seems clear that phenomenal units are a fruitful way of breaking down the individual's stream of behavior, but serious difficulties occur when we attempt to apply them to joint activity such as classroom interaction. For one thing, the English language has but few concepts that apply unambiguously to social processes. As a result, classroom participants appear unaware of, or at least cannot verbalize, the joint properties of their environment. For another, the perception of social events by any given participant suffers from his unique perspective, often resulting from a simple lack of information about what is going on elsewhere in the classroom. Consequently, working with phenomenal units for classroom processes requires the choice of units that are prominent (large or long) and are described in a vocabulary common to all. Units of such dimensions are not likely to tell us much about interactive processes.

Discussion

It would appear that despite their difficulties, the serious classroom analyst must use analytic units in order to study classroom processes in depth, for arbitrary time units and selected, naturally occurring phenomena are simply too limited in the information they provide. Phenomenal units are not acceptable when analyzing social processes. But how are we to avoid the problems of inadequate or biased coverage and the creation of a synthetic language—the major difficulties of analytic units?

Regarding coverage, it is noteworthy that with few exceptions recent studies of the classroom make use of but a single unit. Since only one system of concepts is being tried out, units are chosen to favor that system. One way around the problem is to use separate analytic units for each type of data desired, as did Biddle and Adams (in press a).

Regarding bias, units must be designed to test a maximum number of competing models suggested for understanding the classroom. Consider, for instance, the relationship between B. O. Smith's logical model (Meux and Smith, 1964) and the learning model proposed by Waimon and Hermanowicz (1965). The usual type of reciprocating episode studied by Smith begins with a teacher emission (T), continues with a pupil response (P), and is terminated by another teacher move (T'): $T-P-T'$. In the learning model, the pupil emits a performance (P) which is followed by a potentially rewarding or punishing behavior by the teacher (T) and is terminated by a new pupil behavior (P'): $P-T-P'$. To study units of either the $T-P-T'$ or $P-T-P'$ sort precludes examining the other type. Coding the individual acts or moves of teachers and pupils, however, allows both models to be studied. In fact, concepts involving longer sequences of acts are suggested in the seminal thinking of Smith and others (1964), Nuthall and Lawrence (1966), and particularly by Smith and Geoffrey (1965) in their discussions of "banter" and the development of normative and belief systems in the classroom.

Dependence upon longer analytic units in classroom studies has in part appeared to reflect not only a commitment to certain models of classroom interaction but also an unwillingness to use the computer as an aid in classroom research. To date, only Flanders, B. O. Smith and his co-workers, Bellack and his co-workers, and Biddle and Adams have made serious attempts to find the simple sequences of classroom phenomena. Given the computer, one can make complex sequence analyses that will permit assessment of the competitive strengths of logical, learning, leadership, and other models of classroom interaction, and will at the same time help generate new concepts for expressing the complexities of classroom events.

Finally, the use of synthetic language in the analytic process is perhaps more a blessing than a problem. As in all fields, researchers in education have their own vocabulary, and their descriptions of classroom events tend to reflect the strictures of their training. If research is to have a creative impact on education, that impact will in part result from a new, empirically based, analytic vocabulary of concepts for describing classroom processes.

Conceptual Posture

One persistent problem of behavioral analysis is this: What should be observed—the *intent* of behavior, its *objective characteristics*, or its

effects? The problem may be illustrated by observing an incident in which a younger child attempts to strike an older child. The motive of the younger child is *hostility*, his action is *aggression*, but its effect is to create *amusement* in the older child. Each of these qualities—hostility, aggression, amusement—may be coded with reliability. But are all equally useful? Each of these postures finds adherents among those who have studied classroom processes. For Schoggen (1963), an act is identified by inferring the intent of the actor. For Flanders (1960), the proper categories discriminate objective characteristics of action. Medley and Mitzel (1963) argue that recording effects is often more precise and valid than recording intent, and regardless of the intent of teachers it is the effect of teacher action on the child that counts. It is also possible to discover these same emphases given to observation of social, as opposed to individual, events in the classroom. Gump (1967) argued for coding the "intrinsic type" of a classroom segment rather than what actually happened; Perkins (1961) categorized the existing classroom structure; and Biddle and Adams (in press a) offered various codes for classroom function, or those social phenomena that are created through classroom activity.

These various approaches to conceptual posture have distinct implications, depending on whether individual or social processes are being encoded. At the individual level, it is legitimate to code intent, objective characteristics, or effect of behavior. If one is interested only in the determinants of teacher behavior, for instance, then judgments of teacher intent are appropriate. If one is solely concerned with teacher competence, judgments of the effect of teacher behavior on pupils would be more appropriate. If, however, one's concerns are broad and one is interested in testing competing models of interaction or in studying both individual and social determinants of behavior, it would be wise to emphasize the study of objective characteristics of behavior. Indeed, it may be argued that although our vocabulary is replete with intentional and effectual words, the cues by which we make these judgments are drawn from overt performance characteristics.

The problem of conceptual posture is more complex at the social level. In particular, judgments about "social intention" are likely to suffer from unexamined inductive assumptions and teleological fallacies. Such unclear concepts as *group goal* or *social purpose* might refer to written specifications or rules such as school regulations, to shared phenomenal intentions on the part of participants, to judged outcomes of social activity regardless of intention, or to quasi-stationary states of the social system. Often, however, they refer to inductively reached conclusions on the part of the investigator, in which case any datum collected by rating instruments reflects only the inductive judgments the investigator has already reached. The problem of social effects is only slightly less bothersome. Social "functions" are often confused with social "intentions," so much so that Merton (1957) recommended a distinction between manifest (intended)

and latent (not intended) outcomes of social action. If we clearly restrict concern to the analytic analysis of social effects, then social functions may legitimately be studied. But abstract social effects may be difficult to judge, and many effects of classroom activity take place after the classroom has been disbanded. For social action as for individual behavior, it seems to the writer that greatest emphasis should be given to objective characteristics.

Concepts Used

In reviewing concepts appearing in classroom interaction studies, it is useful to assume an ideal, or typical, role model for classroom interaction: classroom interaction takes place among members of two positions, a single teacher and a group of pupils. Pupils may appear in either of two roles—as a group of passive audience members, or as individual targets who interact directly with the teacher. Teacher behavior may be dealt with separately, as may target or audience behavior; or interaction between the teacher and target may be studied as a unit. Finally, the classroom as a social system evidences an externally imposed structure, an internal structure, and a series of social functions. That classrooms may show forms of behavior other than those suggested in this model is clear. But this model appears to be adequate for most of the concepts proposed so far by classroom investigators. More complex models are described by Biddle (1964) and Biddle and Adams (in press b).

Teacher Performance

Most of the classroom studies reviewed have employed concepts for teacher performance. Although the concepts utilized appear to cover an enormous conceptual territory, in actuality only three basic teacher characteristics appear to be dealt with. The first is teacher *action*, or concepts describing the immediately observable activities of the teacher. The following are examples of suggested lists of teacher action:

Flanders (1960)

- Accepts pupil's feelings
- Gives praise
- Accepts pupil's idea
- Asks a question
- Lectures, gives facts or ideas
- Gives directions
- Gives criticism.

Hughes (1959)

- Controlling
- Imposition
- Facilitation
- Content development
- Personal response
- Positive affectivity
- Negative affectivity.

Jackson (1965)

Control pupil response
 Search for or stimulate pupil response
 Display educational materials
 Refine "bad" responses
 Stabilize "good" responses
 Plan future pupil responses.

Perkins (1964)

Does not accept pupil's idea
 Praises or encourages
 Listens to, helps, supports
 Accepts or uses pupil's idea
 Asks questions about content
 Asks questions that stimulate thinking
 Lectures, gives facts or opinions
 Gives directions, commands, orders
 Criticizes or justifies authority.

A second major focus of concepts for teacher performance is on *manners*, the way in which teachers conduct their behavior. For instance, Ryans (1960) asked observers to rate the warmth, organization, and stimulation of teachers, while Kounin, Friesen, and Norton (1966) were concerned with the clarity, firmness, child treatment, intensity, focus, overlappingness, and with-it-ness of teacher performance in deviancy control.

The third recognizable focus has been on teacher *characteristic roles*, i.e., the relatively stable patterns of behavior exhibited by teachers in various classroom situations. Perkins (1964), for example, recognized the teacher as a leader-director, resource person, supervisor, socialization agent, and evaluator, while Gump (1967) saw teachers as watcher-helps, participators, action directors, recitation leaders, instructors, readers, and testers. Kounin, Friesen, and Norton used a similar list.

The similarities and disparities among these lists of concepts for describing teacher performance pose serious analytic questions. First, there appears to be considerable conceptual overlap between items listed as actions, manners, and characteristic roles. Second, and perhaps more important, although most of these lists are intended to be exhaustive of teacher performance, it is remarkable that additional concepts for teacher performance are found in any given list that do not appear on other lists. This suggests that the concept lists do not, in and of themselves, constitute an analytic *facet*. Guttman (1951) and Foa (1965) suggested that one of the fundamental rules for constructing a coding system is to make certain that any given set of coding categories contributes but a single facet. A facet (or dimension or aspect) is a set of categories into which phenomena may be placed and for which there is a clear basis for placing each event into one and only one category of the system. For example, varieties of apples form a facet, but varieties of apples, oranges, and elephants do not.

Each of the category lists for teacher performance is claimed to be exhaustive, and yet it seems reasonable that a teacher might simultaneously "accept pupil's feeling" and also "give praise" (in the Flanders list) or might both "facilitate" and utilize "positive affectivity" (in the Hughes list). Thus, we are led to the conclusion that these concept lists are not, in fact, unifacted. For characteristic role concepts an additional problem appears. Although some of the categories specified for teacher performance imply the existence of a given form of classroom interaction (for example, a lecture or a test), little effort has been given to the problem of analytically separating the various forms of classroom activity from the more numerous roles teachers might play in them.

Although the studies reviewed have demonstrated the reliability of their observational instruments, few attempted to analyze or theorize about the underlying conceptual structure that informs the category set used. Until such an analysis is provided, the reviewer has little to go on when relating encoded teacher behavior with other classroom data. Indeed, the proliferation of similar but not identical lists for categorizing teacher performance suggests that the investigators themselves do not know what to make of findings that are presented for these lists.

Audience Performance

Theoretically, audience members may also be expected to exhibit action, manner, and role characteristics in their performances, but classroom investigators usually assume that the audience is both inactive and passive in comparison with the teacher. The inactivity of the audience implies that fewer action distinctions will have been suggested for audience pupils than for the teacher. The passivity of the audience also suggests that concepts pertaining to audiential role are more likely to reflect classroom structure (an independent variable) than pupil response (a dependent variable). Although this assumption is questioned below, audiential role concepts are reviewed in a later section as an aspect of classroom structure. Among recent investigators who have suggested concepts for audiential action, Perkins (1965) suggested that pupils may be interested in ongoing work, reading or writing; intent on work in another curricular area, intent on work of a nonacademic type: socially work-oriented, social or friendly; showing high activity or involvement, or withdrawn. Kowatrakul (1959) distinguished pupils who are intent on ongoing work, socially work-oriented, social-friendly, momentarily withdrawn, intent on work in another academic area, and intent on work in a nonacademic area. Ryans (1960), dealing with audience manner, rated the alertness, responsiveness, confidence, and initiation shown by pupils. Medley and Mitzel (1959) provided categories of participation, interest, order-seeking, and classroom order; and Kounin, Friesen, and Norton (1966) rated pupils as

involved in work, not involved in work, restless, languishing, and engaged in task-related or non-task-related deviancy.

The basic criticism of concepts for teacher performance may also be made of concepts for the audience: the concepts proposed appear to represent a ragbag of distinctions, and few investigators have provided a discussion of the underlying conceptual structure that informs the set of concepts used. Also, the fact that the audience is usually composed of a group of pupils poses additional problems. For one, it is possible for dependent variable phenomena to appear at the collective level in the audiential group. Audiences may become cohesive or behavioral contagion may occur. Interestingly, the bulk of concepts used to date for audience characteristics are individual rather than collective in their orientation. A second problem concerns the handling of audience members who deviate from the behavior pattern of the majority. In recent classroom studies this problem has been solved in two ways. Some investigators (Kowatrakul, 1959; Perkins, 1964; Sears, 1963) have rated the behaviors of individual audience pupils, but most studies have utilized a rating of the audiential majority.

Target Performance

Although target pupils are easy to recognize and generally more active than members of the audience, few concepts have yet been proposed by classroom investigators for target behavior. Presumably this lack stems from the fact that identification of the target pupil is evanescent and shifts with changes in the teacher's attention. Concepts used have also tended to be quite general. Flanders (1960) discriminated between target response and initiation; Waimon and Hermanowicz (1965) encoded the adequacy and magnitude of the target pupil's response to the teacher; while Gnagey (1960) studied the power and reaction to deviancy control of target pupils. It is evident that many additional characteristics of targets may in fact be observed. Smith and Geoffrey (1965) suggested that sharp personality differences are reflected in the behaviors of target pupils and that characteristics target roles may be observed in the stable classroom. But most investigators have considered target behavior only within the context of teacher-target interaction.

Teacher-Target Interaction

Within the past five years several teams of investigators have given serious attention to the analysis of teacher-target interaction. These studies have turned away from static models of teacher or pupil behavior and have focused instead upon the interactive sequence of moves. Since various types of sequences may be analyzed (for example, sequences initiated by the teacher versus sequences initiated by a pupil), such analyses have

usually suggested models and restricted interest to those sequences that meet the models prescribed. Four such models appear in the literature.

Language models appear in the work of Nuthall and Lawrence (1966), Smith and others (1964), and Taba, Levine, and Elzey (1964). Sequences of such a model generally begin with an initiating move by the teacher. They are then continued by the target pupil, may or may not contain additional teacher-target interaction, and are terminated by teacher comment or by a change in the subject matter. Smith offered various systems for classifying such sequences. For instance, reciprocating episodes may define, describe, designate, state, report, evaluate, etc.; explanatory episodes may be causal, normative, or teleological; teaching ventures may be causal, conceptual, evaluative, informatory, and the like; and moves themselves may have a variety of functions within the overarching sequence unit. Nuthall and Lawrence offered a classification of the moves that the teacher may make when initiating the sequence (comments, questions, permissions, responses, requests, etc.), of target responses (responses, requests, comments, etc.), and of methods of terminating the sequence (teacher comments, no comment, repetition of response, etc.). Taba, Levine, and Elzey rated sequences for (a) designation (whether the source was pupil or teacher and whether information was sought or given), (b) function (whether the unit related to management or content), and (c) level (the relative concreteness or abstraction of the unit). They also dealt with various cognitive tasks, including those of grouping and labeling, interpreting and making inferences, and predicting consequences.

Learning models have been suggested by Nuthall and Lawrence (1966) and Waimon and Hermanowicz (1965). In these models one examines a sequence which begins with behavior by the target pupil which is then acted upon by a teacher stimulus. The effectiveness of the stimulus is judged by changes in the target pupil's behavior. Waimon and Hermanowicz suggested that the teacher may provide drive, cue, and reward for the pupil and that the moves of the teacher may be activating, maintaining, informing, cueing, reacting informing, reacting cueing, and positive, negative, or neutral rating.

Decision-making models have not yet been applied directly to the encoding of teacher-target interaction, although Smith and Geoffrey (1965) suggested that such a model is probably more adequate than the language or learning model. In this model, concepts are encoded to express problems that teachers and pupils must overcome in dealing with their collective, classroom world. Smith and Geoffrey suggested a branching model for interactive sequences in which each move opens up new possibilities for continued interaction.

Flexible models are those in which interactive sequences may be analyzed to check any of a variety of models, provided only that sufficient detail is encoded regarding moves of teachers and targets in the classroom. The best example of such coding to date may be found in Bellack

and others (1963, 1965, 1966), in which interactive moves are coded for the speaker (teacher, pupil, or device), type of move (structuring, soliciting, responding, reacting), substantive meaning, substantive-logical meaning (defining, fact stating, explaining, opining, etc.), instructional meaning (assignment, material, person, procedure, etc.), and instructional-logical meaning. Although Bellack and others are also interested in interactive sequences, their work differs from that of Smith and others (1961) in that sequence types are constructed rather than anticipated. It should be noted, however, that the code categories developed have reflected both the limited subject matter task offered by the investigators to subjects and the investigators' concern with "meaning" to the exclusion of manner, reinforcement, or decision making.

Externally Imposed Structure

Various characteristics of the environment may impose structure upon a classroom, and examples may be found in which these restraints have appeared in codes for classroom processes. It is possible, for example, to discriminate the academic subject matters with which a teacher deals (see Gump, 1967; Hughes, 1959; Kounin, Friesen, and Norton, 1966; Nuthall and Lawrence, 1966; and Smith and others, 1961) and also to recognize a variety of nonsubject performances that are imposed by administrative regulation or educational ideology such as sharing time, show and tell, milk money time, and the like (Gump and Kounin, 1960). Such impositions often have subtle effects on the classroom, however, which are not readily observable. Smith and Geoffrey (1965) spoke of such environmental constraints as the curricular and other rules, the physical conditions of the classroom, the personalities and predilections of superiors, and the beliefs, values, and norms of the faculty, pupil clique, and parents. Whether such phenomena can be found to have observable concomitants in the classroom is moot: some certainly do but may be studied only when one is willing to collect data in a wide variety of schools and classrooms.

Internal Structure

Various structural components of the classroom have been studied within the past few years. Concepts for classroom structure may conveniently be grouped under five headings.

Communication structure is concerned with the fact that classrooms may from time to time be broken into more than a single communicating group. Some pupils may be doing seat work, or two or three pupils may hold a whispered conversation to which others are not privy, or the teacher may set up a work group while he works with individual pupils in recitation. Gump (1967) discriminated among class together, private,

free, or sectioned: Kounin, Friesen, and Norton (1966) coded group configuration; and Biddle and Adams (in press a) recognized a quorum, segment, or individual and allowed for structures including a central group, peripheral groups, and noninvolved persons. The latter authors also discriminated between the transitory roles of persons in communicating groups, including the roles of emitter, target, and audience (see discussion of characteristic roles below).

Ecological structure deals with the relationships among the bodies of the classroom participants and their proximity to and use of the physical properties that are found in the classroom. Biddle and Adams (in press a) developed a classroom grid model in which they are able to place the members of communicating groups. Kounin, Friesen, and Norton (1966) also used a location code. Although Bellack and others (1963, 1965, 1966) allowed emissions from a nonhuman source (such as a television set or blackboard), no investigator has, to our knowledge, systematically studied the ecological effects of chalk, pencils, model airplanes, or frogs in the classroom.

Activity structure concerns the characteristic mode of activity that involves classroom members. Although words for classroom activity structures are common enough (lecture, discussion, etc.), these concepts have rarely been applied to classroom observation studies. Apparently they simply do not apply reliably to observable patterns of classroom activity. Smith and others (1964) distinguished between monologues and dialogues. Flanders (1960) suggested a classification of activities into administration, evaluation, new material, teacher-pupil planning, other class discussion, and seat work. Perkins (1964, 1965) suggests large-group group or committee work, individual work or project, seat work, small-group, and oral reports. It would appear that many of these activity concepts overlap with those pertaining to communication structure and characteristic role. It is the author's impression that no investigator to date has done a good job of conceptualizing classroom activities and that activity conceptualizations will have to be analytic in character.

Characteristic roles are the stable patterns of behavior that are evidenced by classroom actors within classroom activity structures. During a lecture, for instance, the teacher (or a pupil) may be the lecturer (or a member of the audience). A discussion allows various roles to be performed, such as those of ideational leader, emotional leader, etc. (Bales, 1958). During seat work, the teacher may sit quietly at his own desk, or walk up and down the aisle, or hold intense discussions with selected pupils, etc. Characteristic roles for the teacher have already been reviewed. Such roles may also be conceptualized for pupils as a group or for individual pupils. Kowatrakul (1959) suggested that the pupil may be involved in seat work, may be watching and listening, or may be discussing. For Perkins, pupil roles were those of large-group discussion, class recita-

tion, individual work or project, seat work, small-group or committee work, and oral report. Gump (1967) discriminated intake (own or class materials, active or passive); draw, make, or do; sing, chant, or play musical instruments; large muscle activity; and "readying." Smith and Geoffrey (1965) suggested that individuals in the classroom may be seduced into certain classroom roles, such as "clown," "patsy," "butt," and the like—roles which persist through the class year, which appear as a result of teaching strategies and individual needs, and which color the effects of instruction for the pupils involved.

Social functions. Although observations of the outcomes of social behavior are necessarily at a high level of abstraction, it is possible to observe social functions in the classroom. At least four types are dealt with in recent studies. *Content* deals with classifications of the subject matter about which the classroom or its subgroups may be communicating. For example, Biddle and Adams (in press a) differentiated assigned subject matter, nonassigned subject matter, management-organization, and socialization as major topics of classroom communication; a similar classification was suggested by Bellack and others (1963, 1965, 1966) for the interactional move. *Mode* expresses the form of communication. Biddle and Adams (in press a) discriminated doing, information exchange, and intellectualization; Jackson (1965) suggested a classification system involving instruction, group management, and classroom control. *Phases* of the classroom system may also be recognized; Gump (1967) discriminated preparations, consummations, and evaluations. Finally, another type of social function is suggested by the concept of *classroom culture*. Various commentators, notably Smith and Geoffrey (1965) and Videbeck (1965), have noted that much teaching activity is devoted to the creation of shared norms, values, or beliefs; these are created early in the class year and constitute a base for subsequent social interaction. Smith and Geoffrey make the point that teachers in slum schools often cannot count on middle class achievement motives in pupils and must create appropriate classroom norms before even minimal instruction can take place. It should be possible to make inferential observations about classroom culture, although to our knowledge no investigator has attempted this task.

Evaluation

It is clear that a striking range of concepts has already been used for the observation of classroom phenomena, and that most conceptual systems developed to date reflect a lack of analysis or theory about their underlying structure and generally fail to recognize the existence of other types of concepts. As a result, attempts to synthesize the joint implications of these systems face great difficulties. This does not mean that one cannot recognize families of concepts or choose among those families concepts which are of greater utility for specific research purposes. It would seem, for example, that the relatively static concepts of teacher and target per-

formance are probably less useful than that of teacher-target interaction. Among interaction concepts, it would appear that the extensive coding of interactive moves combined with the analytic reconstruction of behavioral sequences by computer analysis holds great promise. Audiential characteristics in reaction to interactive moves may be judged regardless of the interactive unit chosen. At a higher level of abstraction, structural and functional properties of the classroom constitute the enfolding environment which enables and is affected by teacher-pupil interaction.

Summary and Conclusions

Five specific characteristics of recent research in classroom behavior have been reviewed: coverage, method of data collection, unit of analysis, conceptual posture, and concepts used. Although a wide variety of techniques and approaches have characterized the programs reviewed, to date the emphases have been limited and lacking in conceptual integration. (a) The majority of recent studies have considered only a limited variety of classrooms and have involved only a single independent variable by which classrooms were differentiated. (b) Most studies have reported the use of observer rating by a single person stationed at the rear of the classroom, but for the comprehensive, analytic study of classroom processes an audiovisual recording is required. (c) Many studies have used arbitrary or phenomenal units of time for the making of behavioral records, whereas it seems that analytic units must ultimately be devised. (d) Some studies have attempted to code behavioral intent or effects, rather than objective behavioral characteristics, although the latter are more reliably judged and involve fewer possibly untenable assumptions. (e) The majority of research workers have developed their own conceptual systems in apparent ignorance or disregard of the concepts used by other investigators and have failed to provide an analysis or theory about their underlying conceptual structures. Thus, although a wide variety of classroom phenomena has in fact been investigated, it is difficult for both the reviewer and the investigators to understand the relationships between their findings and those of others.

How adequate are the concepts proposed in these studies for the yet to be developed empirically based theory of instruction? How broad is their coverage, and what is missing? It appears to the reviewer that the major field as yet untapped in classroom research is that of linguistics. Linguistic usage differentiates three domains of concepts: semantics (the study of meaning), phonology (the study of sounds), and syntax (the study of language forms and sequences). From a linguistic point of view, the majority of the codes suggested in the studies reviewed are semantic in orientation. This may be seen most vividly in the researches of Smith and others (1961) and Bellack and others (1963, 1965, 1966), where

codes were devised for the phenomenon that linguists would term *discourse*. But what about phonology and syntax? Is it not possible to study the vocabulary, grammar, and lexicon of classroom discourse? Clearly the answer must be yes: in fact, some investigators have already begun to examine these elements in relationship to education, social class, and other broad independent variables. Bernstein (1962, 1966), for example, discussed language problems and social class in London children. Loflin (in press) examined the phonology and syntax of English as spoken by urban Negroes and suggested that the rules of Negro speech are sufficiently different from those of white, middle class Americans to interfere with language acquisition and classroom communication. These observations lead to the suggestion of an "ideal system" of concepts for expressing classroom events. Such a system must be composed of three broad systems of concepts: (a) concepts for classroom activities as a whole, including structural and functional properties of the collective social states in which classroom members are involved; (b) concepts for the public discourse of interactive moves in which the majority of overt communications within the classroom are expressed, including concepts for overt action and audiential reaction; and (c) concepts for classroom language usage, including syntax and phonology. It is also suggested, without further argument, that by using such a trioka of conceptual systems it will be possible to develop an empirically based theory of instruction.

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CHAPTER XI

Theoretical Formulations for Research on Teaching

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What conceptualizations, formulations, and analyses of research on teaching have been set forth since 1962? Writing of this kind has appeared in some abundance, as befits a field of research that has not yet achieved the new paradigms that are the precursors of fruitful revolutions in science. The ideas in such discourse determine the research worker's answer to his first and crucial question: What research is worth doing?

The Proposed Revolution in Teaching

A revolution in teaching is being fomented. If successful, it will overthrow the hegemony of the centuries-old pattern whereby one teacher and 20 to 40 pupils engage for most kinds of instruction in a teacher-dominated discourse. The revolutionary force is programed instruction—broadly defined (Corey, 1967) as instruction in which objectives are described with special care and explicitness, behaviors are analyzed with much psychological sophistication, sequencing is based on an experimental approach, revisions are made after empirical evidence, instructional stimuli are carefully developed and controlled, frequent and explicit responding by the learner is procured, and relatively quick knowledge of results is provided the learner. If the revolution succeeds, the teacher will spend much less time each day with groups of students in time-honored ways—discussing, lecturing, tutoring, demonstrating, and so on. And such traditional activities will need to be justified rather than taken for granted.

The gathering signs of the revolution have been noted in the mass media (e.g., Bowen, 1967), in *Fortune* (Silberman, 1966), in the *Scientific American* (Suppes, 1966), and in a yearbook of the National Society for the Study of Education (1967). Hanson and Komoski (1965) reported that the percentage of responding school administrators reporting some use of programed instruction increased from 11 percent in 1962 to 36 percent in 1963. In short, a spectre is haunting research on teaching—the spectre of programed instruction.

Educational research workers are divided on this possible transformation of the school. Some (e.g., Jackson, 1966b) regard it as neither desirable nor probable, while others hold that "there is every reason to suppose that good self-instructional programs are highly effective" (Gagné, 1965, p. 282) and, further, that "holding students together in a class is

probably the greatest source of inefficiency in education" (Skinner, 1961, p. 387).

Whether the revolution is smoldering or well under way is a matter of perspective. But it cannot be ignored in the present review, since it threatens to render irrelevant much of the research on teaching that has been done, including much of that published since 1962. It is with this caveat in mind that the reader should consider what follows.

"Describing" versus "Improving" in Research on Teaching

One cleavage in approaches to research on teaching is that between describing, or concern with the way teaching is (Jackson, 1966a), and improving, or concern with the way teaching ought to be (Stolurow, 1965). The first of these approaches regards teaching as a realm of phenomena worth studying simply because it exists and is fascinating. The second deals with teaching as something needing to be improved, because it is not as good as it ought to be. The first approach resembles that of the anthropologist studying cultures neutrally; the second, that of the inventor working on a better way to meet a practical need.

Protagonists of the two approaches have difficulty understanding one another. Describers see improvers as tampering with humanistic values and probably failing because of their poor understanding of the human condition. Improvers consider describers to be indifferent to the inadequacies of the conventional classroom or bent merely on improving our knowledge of obsolescent forms. Describers like Bellack and his co-workers (1966), Flanders (1964), Jackson (1966a), and Meux and Smith (1964) have produced detailed analyses of what goes on in present-day classrooms. Improvers like Glaser (1965), Skinner (1965), and Stolurow (1965) regard the present-day class as hopelessly inconsistent with known facts about individual differences among learners, the difficulties of appropriately structuring and sequencing subject matter in the heat of teacher-learner interaction, and the needs of learners for thousands of reinforcement contingencies.

The long-range assumption of describers is that once important correlates of teacher effectiveness in the present-day classroom have been ascertained, it will be possible to train teachers to be more effective. They take the conventional classroom as given and seek to improve the behavior of the teachers in it. To lay the bases for such improvements, they seek the correlates of teacher effectiveness in the classroom. They take what Stolurow (1965) called a "passive" approach in that they seek to "model the master teacher." The improvers, taking an "active" approach, attempt rather to "master the teaching model," i.e., to develop a new model of instruction that will make explicit the manipulable elements and relationships needed to optimize learning. Experimentation will correct and refine the model.

Two Convergences on Conceptions of Teaching

Despite their differences, describers and improvers have produced some strikingly similar formulations. First, consider how they analyze the teaching task. Jackson (1966a) distinguished between the "preactive" and the "interactive" phases of teaching. By preactive, he meant those aspects of teaching behavior that the teacher engages in prior to meeting pupils face-to-face. In this phase, the teacher selects objectives, plans the curriculum, arranges the classroom, and studies the readiness of pupils. In the interactive phase, the teacher provides pupils with verbal stimulation of various kinds, makes explanations, asks questions, listens to students' responses, and provides guidance.

This distinction parallels that made by Stolurow (1965) in formulating the model of programmed instruction. He first distinguished the "pre-tutorial" phase, which is aimed at the selection of an initial teaching program intended to produce a given outcome; it takes into account the desired outcomes, or objectives, and the learner's entry behaviors. The "tutorial" phase, analogous to Jackson's interactive phase, consists in the ongoing programmed instruction itself, in which the student is presented with instructional material and tasks in "frames," is required to respond to the tasks, and is given feedback as to the correctness of his response.

Second, consider their formulations of the instructional process. How different is this process in conventional classrooms from that in programmed instruction? Bellack and his associates (1966) made an intensive study of typescripts of tape-recorded language in 15 social studies classes. They found that—

The fundamental pedagogical pattern of discourse consisted of a teacher's solicitation followed by a pupil's response; this sequence was frequently followed by a teacher's reaction. In other words, a typical pattern started with the teacher asking a question. . . , which a pupil answered. . . , followed by the teacher's reaction to or rating of the pupil's response. . . (p. 55).

At least in these classes, teachers typically followed a pattern similar to that of programmed instruction.

Both live and programmed instruction exhibit a repeated sequence of (a) structuring, (b) presentation of ideas, (c) solicitation of a response, (d) response by the learner, and (e) reaction to the response. This is the same model, in essence, as that explicated by Gage (1963) on the basis of formulations by B. O. Smith (the "cycle of giving and taking instruction"), Ryans (adapting the schema of dyadic units set forth by R. R. Sears), Stone and Leavitt, and Runkel. The carefully analyzed data of Bellack and his co-workers confirm what has long been suspected to be the predominant pattern of teacher-student interaction in the classroom. In short, live teaching and programmed instruction seem to have in common a basic cycle or rhythm.

Models of the Domain of Research on Teaching

Attempts to schematize the domain of research on teaching continue to appear. Teacher behavior was formulated as information processing by Ryans (1963). The information processing was hypothesized to involve a five-phase sequence of activities: (a) sensing, identifying, and classifying inputs; (b) evaluation of possible courses of action; (c) the making of decisions by the teacher; (d) programing or logical-psychological ordering and arranging of information output; and (e) transmission of appropriate information to the pupil. The whole process was considered to be influenced by the teacher's information inputs and information processing capabilities, on the one hand, and by external information inputs, or interacting conditions external to the teacher, on the other.

The formulation seems to be all-embracing, and that is perhaps its major weakness; it seems to exclude nothing and to provide little guidance as to the entry points for fruitful research. As elaborated by Ryans's two complex charts, it includes almost every variable conceivably relevant to teaching.

A criticism of the formulation of teaching as information processing and decision making was made by Jackson (1966a) in his distinction between the preactive and interactive phases of teaching. Preactive behavior may indeed "resemble, albeit crudely, the stereotype of the problem solver, the decision maker, the hypothesis tester, the inquirer" (p. 13). But—

In the interactive setting the teacher's behavior is more or less spontaneous . . . lately it has become popular to think of the teacher's activity in terms that describe the problem solver or the hypothesis tester. . . . There may be some advantage in using these logical and highly rational models to describe the teacher's in-class activities, and there may even be some moments when the teacher feels like a decision maker in the interactive setting, but these moments, I would wager, are few and far between (pp. 13, 14).

The interactive phase was similarly characterized by Cronbach (1967). In adapting instructional method to the individual, the teacher—

Barely acknowledges the comment one pupil makes in class discussion, and stops to praise a lesser contribution from another who (he thinks) needs special encouragement. He turns away from one pupil who asks for help—"You can find the answer by yourself if you keep at it"—and walks the length of the classroom to offer help to another, because he has decided to encourage independence of the former pupil and minimize frustration of the latter. . . . The significant thing about these adaptations is their informality (pp. 28-29).

The uncontrived character, speed, and uncontrollability of teaching moves in the "interactive" phase make the formulation of teaching as information processing seem merely metaphorical, not to be taken literally.

Biddle (1964) offered a "seven-variable model" for the investigation of teacher effectiveness. In this model, (a) formative experiences, (b) teacher properties, (c) teacher behaviors, (d) immediate effects, and (e) long-term consequences serve as main sequence variables; (f) classroom situations and (g) school and community contexts serve as contextual variables. The main sequence variables form a casually linked chain, while the contextual variables provide the situations and environments which imbed and interact with the variables thus linked. Biddle's model, falling into the category of criterion-of-effectiveness paradigms, resembles those formulated by Mitzel and Ryans, as reviewed by Gage (1963).

After reviewing the forms of measurement available for the variables in his model, Biddle classified these methods as "recommended," "alternate," and "poor" for each of his seven categories of variables. Whether such evaluations of a given method—such as "objective instruments," "behavioral observation," or "rating forms"—should be made without regard to its specific form and purpose is questionable. In particular, rating methods have often been used in reliable and valid ways; Biddle's call for "the elimination of rating forms in serious research on teacher effectiveness until an understanding of the biases is available" seems much too strong. But his overall categorization of variables seems useful, in view of its similarity to previous attempts, in indicating an emerging consensus as to the major domains of research on teaching.

Another comprehensive model—one for school learning—was set forth by Carroll (1965) in terms that provided for (a) "quality of instruction" as one of five major variables, the others being (b) aptitude, expressed as the amount of time required by the learner to attain a specified criterion; (c) perseverance, measured by the amount of time the learner is willing to spend at learning; (d) opportunity to learn, defined as amount of time actually allowed for learning in the particular setting; and (e) ability to comprehend instruction, or perhaps verbal intelligence. Such a model, applied to the study of teaching, would require that the other four variables be controlled, held constant, or adjusted for. Statistical methods (e.g., analysis of covariance or factorial design), matching, or random assignment to experimental and control groups could be used to compare one instructional method with another. As determiners of the quality of teaching itself, Carroll sees such factors as listenability, readability, the structure and logic of the concepts presented, reinforcement schedules, and incentive systems.

Siegel and Siegel (1967) suggested a paradigm entailing multivariate analysis and provision for studying interaction among variables. Their "instructional gestalt" embraces four classes of independent variables (learning environments, instructors, learners, and courses) and their interactions; the dependent variables include both effectiveness and process criteria of achievement, thought, attitude, and extraclass behavior. As for

methodology, they regard factorially designed analysis of variance as preferable to correlational methods. In any one investigation, it becomes necessary to exclude some classes of independent variables to prevent the number of combinations from becoming unmanageable. A separate analysis of variance is made for each of the criteria. The approach was illustrated with an investigation of factors affecting the outcomes of television instruction.

The substantive and methodological aspects of the approach need to be considered separately. The former determines the variables investigated and depends on the theories of teaching and learning implicit or explicit in the investigator's operational definitions. Whether the Siegels have chosen wisely in their general outline is hardly disputable, but whether their specific choices in their illustrative investigation will prove fruitful in future investigations remains, of course, to be seen. The methodological model, factorially designed analysis of variance, has long been available, but its uses have not previously been urged as convincingly and forcefully for the investigation of instructional variables. It deserves further trial to determine whether significant interaction patterns can be consistently obtained in successive investigations of the same independent variables, above and beyond main effects. Educational doctrine about the importance of such interactions can be tested in this way.

Relation of Theories of Teaching to Theories of Learning

Must theory of teaching depend on theory of learning? Scandura (1966) took a negative position: many learning principles may be of only incidental importance to a theory of teaching, some teaching concepts and laws have no direct counterparts in learning theory—technologies like task analysis and sequencing could form the subject matter of a teaching theory. Teaching theory operates at a molar level, and reductionism, i.e., reducing molar teacher behaviors to molecular learning principles, is unlikely to be fruitful.

A different position on this question was taken by Ausubel (1967), who held that the present irrelevance of learning theory (Gage, 1964) is not inevitable; it holds only for learning theory to date and not for "a truly realistic and scientifically viable theory of classroom learning" (p. 210). Ausubel similarly took exception to B. O. Smith's position that learning and teaching are different and that a theory of learning cannot tell one how to teach. Rather, "learning is still the only feasible measure of teaching merit . . . valid principles of teaching are necessarily based on relevant principles of learning, but are not simple and direct applications of these principles. . . . I would classify basic principles of teaching as special derivatives of school learning theory" (pp. 212, 213).

In his provocatively entitled *Toward a Theory of Instruction*, Bruner (1966a) presented one chapter bearing directly on theory of instruction. In his view, such a theory must differ from descriptive theories of learning by being prescriptive and normative: that is, such theory is "concerned with how what one wishes to teach can best be learned, with improving rather than describing learning" (p. 40). The theory should specify the experiences that predispose the individual toward learning, the ways in which a body of knowledge should be structured, the most effective sequences in which to present the materials, and the nature and pacing of rewards and punishments. The problem of "predispositions" refers to the activation, maintenance, and direction of the learner's exploration of alternatives. The structure and form of knowledge refer to the ways in which the mode of representation, economy, and power of the structure of any domain of knowledge affect the ability of the learner to master it. In discussing "sequence and its uses," Bruner proposed that the optimal sequence will proceed from "enactive" through "iconic" to "symbolic" representations. As to the form and pacing of reinforcement, he held that knowledge of results is useful at the right time and place. To "discern how the student grasps what has been presented, what his systematic errors are, and how these are overcome," Bruner suggested both "systematic observational studies—work close in spirit to that of Piaget and of ethologists like Tinbergen" (p. 54)—and the use of programs to obtain a detailed behavioral record for analysis.

In a "Discussion of Bruner's 'Theorems'" (Bruner, 1966b, pp. 245-52), participants in the Working Conference on Research on Children's Learning agreed that, whether or not learning theory can handle the problem of instruction, it is not doing so now. On the question of whether separate theories of instruction are needed for different subject matters and grade levels, it was urged that it is possible to concentrate on "general parameters, on transdisciplinary principles which could be concretely applied in different disciplines" (p. 246). Further, it was held that a theory of instruction must rest not only on a theory of learning but also on a theory of development.

Setting forth problems concerning the nature of theory that must be faced prior to any valid development of a theory of instruction, Travers (1966) objected to the position, implied by Bruner's term *prescriptive*, that such a theory must focus on "optimum conditions." That is,

Optimum conditions of various kinds derive from theories but are not the essence of scientific theories. . . . I would conceive of a theory of instruction as consisting of a set of propositions stating relationships between, on the one hand, measures of the outcomes of education and, on the other hand, measures of both the conditions to which the learner is exposed and the variables representing characteristics of the learner (p. 50).

Travers holds that a major obstacle to such theory development is that the technical language needed for such a task has not yet evolved. A theory of instruction has to be empirically based, and the data must be closely related to the phenomena of the classroom.

The dependent variables of the system, rather than being specified in terms of behavior, should be specified in terms of tasks or problem situations or task solutions: thus, a useful taxonomy of objectives would involve a taxonomy of tasks. The task characteristic should be directly observable rather than response-inferred. The tasks should be arranged into a system of scales such that, for a given outcome, all lower tasks can be successfully completed and all higher tasks cannot. The major independent variables can be classified as relating to pupils, pupil tasks, teachers, and teacher tasks. Pupil task variables include those that teachers can manipulate to optimize learning; examples are reading difficulty level, sequencing variables, perceptual complexity, and concreteness versus abstractness. (Computer-based instruction seems objectionable to Travers because it cannot furnish the concrete objects and situations, manipulable by pupils, that are needed for effective learning in the elementary school.) As for research on teacher behavior variables, the difficulty is that hypothetical patterns can be concocted but not acted out by actual teachers. The proper distribution of teacher time over the various tasks could be determined by applying the methods that operations research has developed for solving the "transportation problem," or the problem of optimum use of shipping space to provide, say, maximum military effort at the final port.

No one would disagree with Travers' notions about the importance of empirical data and verification. But he may be wrong in objecting to data-free, or "armchair," analyses and formulations of the problem of theory of instruction, of which his own paper is an instance. Such analyses are helpful in making decisions about what kinds of data should be sought.

This kind of analysis was attempted by Gage (1964) in setting forth the need for specification in developing theories of teaching. He suggested distinctions in terms of teaching activities, objectives, families of learning theory, and components of the learning process. Then he went on to illustrate how certain combinations of these make better sense than others. For example, for one kind of teacher activity (explaining) and objective (comprehension), it makes better sense to draw upon one kind of theory of learning (cognitive) and focus upon one particular component of the learning process (perception). Learning theorists agree that there are many kinds of learning whose dissimilarities in terms of process and phenomena are "much more striking than the similarities" (Melton, 1964, p. 338). Similarly, there must be several kinds of theory of instruction, some better for one combination of objectives and learners and some for others.

A compilation of points of view and approaches to the study of teaching (Verduin, 1967) contained brief chapters on the ideas of various writers. The chapters on the ideas of Bellack, Broudy, Gage, Gallagher, Hickey, B. O. Smith, Suchman, Taba, and Woodruff dealt with cognitive aspects of teaching, or ways in which teachers' behaviors affect learners' achievement of cognitive objectives; the chapters on the ideas of Flanders and Getzels dealt with affective and social phenomena in the classroom.

The Need for Synthesis

Various writers use different conceptualizations of the variables and processes that enter into learning and teaching. This diversity becomes especially apparent in volumes like those assembled by Bellack (1963), Biddle and Ellena (1961), Siegel (1967), and Verduin (1967). Many of the same writers appear in several of these volumes, with only slight modifications of their ideas. Apart from that fact, the books impress one with the need for serious efforts to bring together the ideas that, despite differences in vocabulary and detail, seem to arise in two or more apparently disparate formulations. Successful efforts of this kind would reduce the disorder that arises from the way in which theorists of different persuasions talk past each other, each in seemingly autistic disregard of what the others say.

Item: the concepts of (a) "entry behaviors," as promulgated by the programed instruction school (e.g., Stolurow, 1965); (b) readiness, as advanced by educational psychologists in general; and (c) the pre-existing cognitive structure under which new ideas are subsumed, as formulated by Ausubel (1967). These concepts deal with properties of the learner that affect what and how he will learn. Although they differ substantially in emphasis, detail, and hypothesized *modus operandi*, they have much in common and ought to be collated.

Item: the concepts of (a) cognitive structure, as formulated by Ausubel (1967) and Bruner (1966a); (b) learning structure (Gagné, 1965); and (c) logic tree (Hickey and Newton, 1964), among others. Again, whatever their variations in vocabulary and detail, these similar ideas ought to be assimilated to one another.

Item: the conceptions of the instructional process as (a) cyclical give-and-take (Runkel, Ryans, Smith, and Stone and Leavitt, as cited by Gage, 1963); (b) a pattern of structuring-soliciting-responding-reacting, as described by Bellack and his associates (1966); and (c) a sequence of stimulus (frame representation), response, and reinforcement (knowledge of results), as formulated by the programed instruction school (Stolurow, 1965). Except for reading and lecturing, most instances of instruction, whether programed or provided in the conventional classroom, seem to partake of repeated occurrences of a cycle of this kind. The common ele-

ments in these formulas ought to be recognized as such and brought together.

Item: the compilation of teacher behaving styles by Ryans (1963). based on an examination of a considerable literature on ratings, observations, students' evaluations, responses to inventories, and test results. Although Ryans's lists of variables are categorized in terms of his conception of teacher behavior as information processing, their usefulness does not depend on acceptance of that model. His clusters already make good sense of a roughly logical sort, but the lists can be used in formulating more systematic and coherent categorizations of teacher behaviors and characteristics.

Views on Promising Directions

Apart from those already mentioned, several writers have indicated what they regard as bases for hope that future research on teaching will yield significant advances. Coġan (1963), for example, saw a "new phase" as possible because of the availability of devices for recording classroom behavior in ways that make possible much more meticulous and repeated analyses of such behavior—devices such as sound film and videotape recorders. (Biddle makes the same point in the preceding chapter of this issue of the REVIEW.) Gage (1967) regarded as promising an analytic approach whereby much smaller time-segments of teacher behavior, such as those studied and manipulated in micro-teaching (Bush, 1966), will be examined for their relationships to much more finely discriminated aspects of learner behavior and achievement, i.e., to "micro-criteria" of effectiveness (Gage, 1963, p. 120).

But others see the main hope of progress in thoroughgoing efforts to individualize instruction. Thus, Erickson (1967, pp. 156-57) hoped to "release and give greater freedom to individual-difference variables. . . . The student-linked factors . . . are the key factors that will open up new resources for making significant changes in the quality of the educational process." Related to this outlook is the conviction on the part of many psychologists (e.g., Skinner, Gagné) that instruction in graded classrooms is, in large part, a drawback. "Individually prescribed instruction" (Lindvall and Bolvin, 1967) represents an attempt to do away with the teaching of whole classes at a time by permitting pupils to work at their own pace on tasks prescribed by teachers on the basis of frequently administered measures of learning on small, carefully planned units of instruction.

But even were this general position concerning classroom teaching to be accepted, few would deny that, for some objectives, the teaching of pupils in groups, even whole classes, is advantageous or essential. The question, "What are these objectives?" has not yet been subjected to rigorous analysis. At the least, of course, "ability to participate in group discussions" is such

an objective at all levels of education. Similarly, various kinds of ability to explore ideas through intellectual interaction may require classroom teaching. Or, those things that can be learned best from observing the teacher's modeling of how an educated person behaves require live teachers in classrooms.

Yet much of the contemporary argument in favor of individualizing instruction, or adapting teaching to individual differences among learners, for many kinds of objectives, is extremely plausible. Learners do differ in ways relevant to their ability to profit from different kinds of instruction, content, incentives, and the like. Almost by definition, instruction adapted to these individual differences should be more effective.

If so, why has not the evidence from attempts to individualize instruction yielded more dramatic results? Why are not the mean scores on achievement measures of pupils taught with due respect for their individual needs and abilities substantially higher, in unmistakable ways, than those of students taught in the conventional classroom, where everyone reads the same book, listens to the same lecture, participates in the same classroom discussion, moves at the same pace, and works at the same problems? For the fact is that, despite several decades of concern with individualization, few if any striking results have been reported.

Perhaps the time is ripe for a re-examination of assumptions about what goes on in the conventional classroom. Despite the kinds of apparent uniformity noted above, pupils in the conventional classroom may somehow individualize instruction for themselves so that each takes from it what is fairly well suited to his needs. A search for explanations of this kind may be more fruitful than continued recourse to the plea that, so far, the individualization has not been good enough. Is it inconceivable that the kind of "spraying" of stimuli, ideas, questions, and answers that goes on in a relatively unplanned (unprogramed) way in the conventional classroom does succeed nonetheless, by virtue of its near randomness, in hitting most pupils where they are? Careful analysis of who gets what out of instruction in the conventional classroom may reveal a much greater degree of appropriate individualization than has been thought possible, especially by proponents of explicitly individualized instruction.

But beyond such a possibility there lies the promise, at least in principle, that improved individualization will make a major difference. Such improved individualization could be based upon what Cronbach (1967) described as "aptitude-treatment" interactions. Similar to those outlined by Siegel and Siegel (1967), such interactions occur when "the regression line relating aptitude to payoff crosses the regression line for the competing treatment" (Cronbach, 1967, p. 30). "And it will be a long time before we have adequately validated rules of adaptation that take into account even a half-dozen differential variables" (p. 37). If so, instruction that is not explicitly individualized will not soon be shown to be unmistakably

inferior to that which is. Research on teaching in the conventional classroom will not, in that event, be unrelated to educational needs.

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October 1967

Educational Organization, Administration, and Finance

Reviews the literature for the three-year period
since the issuance of Vol. XXXIV, No. 4, October 1964

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FOREWORD

Readers of former issues of the REVIEW devoted to Educational Organization, Administration, and Finance will notice format changes in the following chapters, for the field is very much in flux. The erstwhile search for "administrative theory," for example, seems virtually abandoned today, though a few scholars still attempt to explain important events in terms of what The Leader is or does. There seems to be a growing tendency to assume that administrative procedures, instructional approaches, schools, and fiscal structures must be analyzed as systems or system components (in the broad sense) and that these systems may be extraordinarily open. Investigation has been widened to include not only the administrator himself (Chapter IV), but teachers as his prime interactors (Chapter V), the organization as his context or even the major determinant of what occurs (Chapter III), the allocative strategies that must be considered (Chapters II, III, and VI), and a wide-ranging politicoeconomic framework (Chapters I and II).

There is still enough second-rate research in the area to justify humility. However, a growing number of scholars are giving sustained attention to the relevant issues. Among the questionnaire lionizers are appearing a few validators. If the scattered potshots now enlivening the field presage an era of good-natured intellectual feuding, prevailing standards of inquiry are likely to improve. These are favorable auguries.

DONALD A. ERICKSON, *Chairman*
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Administration, and Finance

CHAPTER I

Politics and Community Decision Making in Education

H. THOMAS JAMES *

Research in politics and community decision making in education was meagerly reported during the past three years. As pointed out by Campbell, Cunningham, and McPhee (1965), such inquiry has not been notable for clarity of definition and approach. Indeed, many of the conceptualizations guiding educational researchers in these areas, notably those of power and of community, are nebulous. Some of the more promising lines of inquiry during this period have dealt with the determinants of decision making, the correlates of conflict, and the dynamics of school boards. *Cont. dec.* sions on racial issues continue to stir political activity in educational matters but are not reported here because they were included in the February 1967 issue of the REVIEW OF EDUCATIONAL RESEARCH in Chapter III, "Social Policy and Education." Federal legislation on education also was touched on in that chapter; five additional studies are included here because they concentrate on the political aspects of federal-local interaction in decision making.

Community Decision Making

Power and the Community

Defining power as the capacity to influence the behavior of others, Lieberman (1964) analyzed teacher organizations and found that teachers are still unable to use political power effectively; he recommended strengthening teacher organizations as pressure groups. Goldhammer (1965) identified the actors in the decision-making process and presented generalizations about the relationships among four groups. The power structures of two school districts matched on selected social climate factors but differing in school financial effort were analyzed and compared by Kimbrough (1964a). Although no causative relationships were drawn, the study emphasized that elements of community power systems should not be disregarded in future research aimed at explaining the differences in educational policies.

Kimbrough (1964b), through empirical analyses of decision making, challenged the "formal institution-association" concept of power. He found that power resided principally in wide varieties of informal structures rather

* This chapter was prepared with the assistance of Stanford doctoral student Kellet Min.

than being vested in officials in the formal organizations, and he presented generalizations drawn from power studies which may assist educational leaders to recognize covert influence by informal groups.

Two school districts having similar abilities to support public education but differing in local financial effort were studied by Dilks (1965). Using a combination of reputational and issue-analysis techniques to identify the top leaders in selected community organizations, he found that the overlap of the leadership structure in the high effort district was more than twice that of the low effort district. Moreover, formal and informal leadership was more effective in the high effort district in influencing decisions. Marsh (1965), in a similar study of six districts, found differences between those of high effort and those of low effort in leader characteristics, use of formal and informal organizations, and voting behavior. He also found that district boards and superintendents were not perceived as influential.

Harper (1965), using a reputational approach, examined the power structure in school districts in Texas and concluded that the power structure can play a significant role in school bond elections and that the outcome of a bond election can be predicted by sampling the power structure within the district. In a study of one community, Light (1964) concluded that reorganization reduced the influence of the community power structure upon school program and activities.

Another approach to examining community decision making involved analysis of the public attitude. Parker (1964) analyzed public attitudes in selected member districts of the Associate Public School Systems, an affiliate of the Institute of Administrative Research, Teachers College, Columbia University. He found that differences among community responses usually reflected the social and economic patterns within the community; however, there were more similarities among communities than differences. Aiken (1963) devised a model for assessing a community situation. The attributes of the model included the use of the constructive rather than the classificatory method, an interest in the dynamic aspects of events, a psychological rather than a physical approach, and a method which starts with the situation as a whole. The model was designed to enable the administrator to assess a community situation and to establish the appropriate connections of actors and events relevant to the situation.

In studying the problem of obtaining consent of the public for a tax levy beyond the legal limits for a school district operating budget, Fish (1964) found that negative attitudes toward school support were related to a general feeling of economic pressure and that increased tax levies and changing personal incomes were positively related to a feeling that school budgets were too high. This study also showed that voter behavior in school elections was strongly related to the nature of school-public communication through both formal and informal channels. It appeared that school administrators should increase their efforts to reach classes of voters other than parents through their direct communication efforts.

Perhaps the most ambitious empirical study done on school-community relations in this decade was *Structure and Process of School-Community Relations*, undertaken by Carter and Odell and summarized as the last of a five-volume series (1966). The other volumes, prepared by Carter and a number of colleagues and appearing also in 1966, were concerned with informal communications about schools (Vol. I), relations between citizens and schools (Vol. II), the structure of school-community relations (Vol. III), and the process of school-community relations (Vol. IV). This exhaustive analysis will provide a gold mine of possibilities for the administrator who likes to manipulate the local educational scene, but it provides, too, refreshing new evidence to persuade the would-be manipulators that "given our democratic values and our dedication to democratic means for implementing those values, the democratic procedure is the preferred procedure. And sometimes, as we have suggested here, it is the most effective procedure." (Carter and Odell, p. 63)

In Ohio, Willis (1964) examined voter response to six different school financial proposals and selected characteristics of subarea populations. He concluded that voter turnout alone was an insufficient predictor of voter support for programs requiring additional financial support. He also concluded that socioeconomic characteristics alone did not predict the level of voter support for school financial proposals.

Additional References: Cahill and Hencley (1964); Dumond (1964); Hoops (1964); Litt (1966); Lutz (1965); Lutz and Azzarelli (1966); Tope and others (1965).

Determinants of Decision Making

James, Kelly, and Garms (1966) examined the processes by which resources were allocated to the support of public education in large cities in the United States. Three sets of determinants of public school expenditures were postulated: expectations for educational service, financial ability to support public education, and governmental arrangements for decision making. Attention was focused on governmental arrangements for decision making; this set of determinants referred to the political system that allowed the expression of educational expectations and access to resources necessary for their realization. The influence of these governmental variables on educational expenditures was analyzed, with factors of ability and demand held constant in multiple-regression analysis. The governmental variables were (a) property tax assessment ratio, (b) a size factor, (c) method of constituting the board of education, (d) relationship of the business manager to superintendent and board of education, (e) board constituencies, (f) method of selecting the assessor, (g) other governmental controls on the education budget, (h) state limitations on school taxes, and (i) percentage of unqualified teachers. The ability-demand variables alone explained 71 percent of the variation in education expenditures. Through a combination of ability-demand and governmental variables, 73 percent of the variation

was explained. Thus the measures of governmental arrangements used in the study appeared to contribute little to the explanation of variation in expenditures per ADA. However, differences emerged when separate regressions were run on data for Southern districts. Although most of the standard regression coefficients in these two analyses were not significant, differences in the signs of the Southern and non-Southern coefficients were noted: the signs of the ability-demand variables were the same in the South and elsewhere, but the signs for seven of the nine governmental variables were opposite in the South. Thus, some support exists for the hypothesis that a given governmental arrangement may have a depressing effect on expenditures in some districts, but under different conditions in other districts the same arrangement may tend to encourage higher expenditures. In a large group of districts, these effects tend to cancel out.

Using a systems model, Dye (1967) studied the impact of socioeconomic and political variables on state educational policies. The socioeconomic variables, representing inputs, were (a) urbanization, (b) industrialization, (c) income, and (d) adult education. The political variables were (a) the constitutional framework, (b) partisanship, (c) party competition, (d) political participation, and (e) apportionment system. The policy outputs were (a) educational expenditures, (b) educational effort, (c) division of state-local responsibilities, (d) quality in education, and (e) teachers and classrooms. The independent effect of political and socioeconomic variables on state educational outcomes was assessed by simple, partial, and multiple correlational analysis. The finding that socioeconomic variables were more influential than political variables in shaping educational policy in the 50 states parallels the results of James, Kelly, and Garms (1966) in 107 cities. These studies may indicate that the variables used were not sufficiently refined to reveal the impact of political-governmental phenomena, or that interactions of variables were not adequately analyzed, or perhaps that other political variables more important than those included in the models were affecting outcomes. King (1965) found inconclusive relationships among 22 socioeconomic factors and school fiscal policy; he concluded, however, that the factors of local financial effort and elasticity of local demand warrant further research.

In an extensive analysis and comparison of four suburban elementary school districts in Cook County, Illinois, Minar (1966b) sought variations in the style and content of the decision-making process and in the division of authority among school systems with different social-structural contexts. The study was concerned with the methods by which low conflict-high status locales and high conflict-low status locales conducted school transactions, and with the techniques, devices, procedures, relationships, and contents that distinguished the work of school boards and administrations in these kinds of communities. It was anticipated that low conflict-high status districts would show less formal procedures, wider participation in decision-making, more attention to broad policy, more latitude for decisions and

independent actions by the superintendent, less time devoted to district work by board members, and more discussion of curriculum and community relations with less discussion of finance, personnel, and administration. Conversely, it was anticipated that high conflict-low status districts would exhibit more formal procedures, more attention to written policies, restricted participation, divided votes, more attention to detail, narrower latitude for action by the superintendent, and more extensive discussion of finance and personnel with less discussion of curriculum and community relations. Minar's predictions were generally substantiated by his data.

Additional References: Geiken (1965); Kerber and Bommarito (1963); Schrag (1965).

Conflict

Other researchers focused on conflict. Nussel (1964) tested the hypothesis that school-community conflict is essential in a democratic society. He found that while conflict is necessary and desirable in some environments, it should be avoided in the field of school-community relations because of the resultant intergroup cleavage, animosity, and residual bitterness. In a study of 48 suburban school districts, Minar (1966a) identified community characteristics concomitant to electoral conflict. Communities with higher educational and occupational levels were found to have lower levels of dissent. The findings indicated that communities are low conflict communities because they possess conflict-management skills and facilitating attitudes. Konrad (1966) also found that social status was a good indicator of a community's ability to manage conflict within a school system, but, contrary to his expectations, he found no evidence that members of school boards in conflict were any different in social status from members in those that were not. Regarding investigations conducted by the California Teachers Association Personnel Standards Commission as an indication of unmanaged conflict within the local school system, he focused on the utility of social status and of selected structural variables of communities, boards, and professional educators to discriminate between school boards that manage conflict and those that do not. The social status variables were postulated as (a) social rank score of the community, (b) index of social position of school board, and (c) teachers' mean salary level. The structural variables were postulated as (a) percent ADA growth during preceding five-year period, (b) mean years of board service, and (c) percent teachers' salary increase during preceding five-year period. The major hypothesis that the ability of the school board to manage conflict related to its aggregate social status was not confirmed for the total sample in the study; however, social rank score of the community and the structural variables distinguished effectively between the two groups.

Kelly (1967) examined the California school board recall election as a mechanism for the resolution of community conflict. A conflict resolution theory was tested which suggested that the school board recall election

campaign intensified rather than resolved conflict. He found that conflict intensity was significantly higher during the prerecall and recall period than at the start of the recall campaign, and that the campaign polarized the community and prolonged the conflict long after it would otherwise have been forgotten. Two conflict situations were selected for further study through interviews with participants.

School Boards

Goldhammer (1964) summarized studies concerning the purpose and functions of school boards for school board members, school administrators, teachers, and interested lay personnel. Also, the *American School Board Journal* (1967) carried the Cubberley Conference papers on school board studies. Board decisions were analyzed by Lampshire (1964), who concluded that little control was exercised by local boards. In a follow-up study of smaller districts, Turman (1965) concluded that different size school districts exercise varying degrees of local control and that board minutes are not adequate for determining the extent of board control.

A significant method for systematically analyzing the behavior of school boards was proposed by Scribner (1966), who used a political science system developed by Professor Gabriel Almond of Stanford University. Scribner's system comprised four major operational categories: (a) inputs (demands: extractive, symbolic, participative, and regulative; supports: material, obedience, and deference), (b) outputs (extractions, symbols, regulations, and allocations), (c) political functions (articulation and aggregation), and (d) governmental functions (rule making, rule application, and rule adjudication).

Cronin (1965) studied the school boards of 14 cities belonging to the Research Council of the Great Cities Program for School Improvement. Using a historical approach, he examined the relationships between the structure of city school boards and the method of selection of members with their functions over time, giving particular attention to the fundamental struggle between citizens who demand improvement of educational services and those who demand reduction of the school tax burden.

Seeley (1964) examined characteristics of the board, community, and superintendents in districts where superintendents' contracts had been terminated by cash settlement. The most prominent community characteristic associated with this phenomenon was rapid growth. Boards were less likely to have established policy manuals and orderly processes; and superintendents were more likely to be arbitrary in their behavior, have poor personal and public relations, lack training for their jobs, and be simply incompetent to handle their jobs. Another approach to superintendent-board relations was used by Freeborn (1966), who found that the defeat of an incumbent board member almost invariably constituted a threat to the superintendent. This suggested that the superintendent is identified

with the board in an established power structure. Walden (1967) also investigated the nature of superintendent turnover. He gathered data on school board membership changes and changes in the office of the superintendent; turnover was studied in relation to the political stability of the school district. He found a significant relationship between superintendent turnover and school board incumbent defeat. The data suggested that a struggle for power between an emergent power clique and an incumbent one is likely to cost the incumbent superintendent his job if the board incumbents are defeated.

Additional References: Cronin (1965); Kerr (1964); Olson (1965).

Federal Involvement

The subjects of federal aid and federal court decisions, covered extensively in a similar chapter in the REVIEW three years ago, are not treated this time because of the attention given to this area by Fischer and Lahr (1967), except to note five additional studies not reported therein.

Using the descriptive-survey technique, Zinzarella (1964) examined the changes produced in school programs of New Jersey school districts by the National Defense Education Act of 1958. He concluded that although the districts were not dependent upon the Act, the number of participating districts reflected the need for financial assistance and willingness to accept federal aid despite reservations. The Act indirectly controlled school programs by creating imbalances through the stimulation of selected areas. Brinton (1964) studied the effect of federal aid programs on the schools of Pennsylvania and the role Pennsylvanians played to obtain federal support. He concluded that federal funds stimulated improvements in school services and curriculum and that the programs were administered with minimal federal interference. Additionally, while fear of federal control dominated their debates, Democrats and Republicans generally supported federal aid measures.

In a study of the impact of federally sponsored community action programs on the decision-making power of the school board, Nystrand (1966) concluded that (a) programs challenged school decision making in the area of stimulating change, (b) boards relied on the superintendents for establishment and implementation of the programs, (c) participation in the programs stimulated establishment of a director of federal programs, and (d) percentage of funds was dependent on domination of the community action committees.

Johnson (1967) explored the correlates of California school board decisions on whether to apply for National Defense Education Act Title III reading funds—as 513 districts did in 1965-66—or not to apply—as 951 California districts decided that year. He found that districts applying tended to be larger, poorer, more rapidly growing, and more urban. In a second phase of the study he held these characteristics constant by match-

ing and gathered data by interviewing superintendents on the decision-making process. The most significant factor appeared to be the initiative exercised by the superintendent. Through control of agenda, information, and the formal communication process, superintendents seem to control the output of school boards. Satisfactory experience with federal aid appears to be eroding earlier resistance to applying for it on the grounds it might weaken local control.

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CHAPTER II

The Economics of Education

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During the last three years, research on the economic aspects and implications of education has developed very rapidly both in America and elsewhere. The International Economic Association held a conference on the economics of education in 1963, and the proceedings (Robinson and Vaizey, 1966) contain several very interesting items on the contribution of education to economic growth, the measurement of educational costs and expenditures, the balance between different types and levels of education, and problems of finance and planning. The American Economic Association devoted its 1965 meeting to the related topics of innovation, knowledge, and education, and several of the papers presented at that meeting will be cited later in the chapter. The Organization for Economic Cooperation and Development (OECD) formed a study group in the economics of education which has published studies of the relationship between education and growth, the finance of education, organizational problems in educational planning, and the economics of higher education (OECD, 1964a, b; 1966). The OECD (1965b) also launched the Mediterranean Regional Project, which represents a new era in educational planning: six countries have co-operated in drawing up detailed educational plans geared to specific social and economic objectives, and this cooperative exercise has produced useful research and experience on the techniques of planning. UNESCO continued its work in the field and established an International Institute of Educational Planning to conduct training and research.

Parallel to this growth in the number of international agencies concerned with economic aspects of education, there has been a remarkable worldwide increase in the number of individual research workers or units contributing to the subject. However, the interest of economists in the role of education is far from new, and a number of authors, notably Kiker (1966), have traced the origins of the current work on human capital to eighteenth- and nineteenth-century economists. The concept of human capital remains one of the most important areas of inquiry and has illuminated such problems as the contribution of education to economic development in backward countries, the effect of education on income distribution, and methods of determining the future scale of investment in education.

The question of appropriate criteria and techniques for educational planning has aroused fierce controversy; e.g., there is an important difference of emphasis between those who favor cost-benefit analysis and the measurement of rates of return, and the advocates of manpower forecasting. Much of the conflicting literature will be reviewed in this chapter.

Current interest in the United States' War on Poverty has stimulated work on the effects of education on regional and racial inequalities of income and on the relationship between education and unemployment. Some interesting work has been completed during the last three years on methods of financing education and on the analysis of costs and productivity within the education system. There have been a number of wide-ranging volumes dealing with economic aspects and reviews of research which provide convenient summaries and bibliographies. Blaug (1966c) produced a particularly useful annotated bibliography which covers both developed and underdeveloped countries; Deitch and McLoone (1966) confined themselves to American literature.

Additional References: Bowman (1966); Harris, Deitch, and Levensohn (1965); Miller (1966); Wilkinson (1966).

Economic Returns of Education

Expenditure on education and health is now recognized by economists to be a method of investing in human capital, quite as important in its effects on future levels of income as investment in physical capital. Continuing analysis of investment in human capital and measurement of the economic returns of education has been one of the most significant branches of recent work in the economics of education. The benefits of high school or college education are measured in terms of the higher lifetime earnings of the highly educated, and these are then related to the costs of education by calculating either an internal rate of return or discounted present values of future income.

Earlier attempts to quantify the economic benefits of education were rightly criticized on the grounds that they failed to allow for factors such as native ability and social background and attributed all higher earnings to education. Becker (1964) and Blaug (1965) calculated the private and social rates of return to secondary and higher education in the United States and Great Britain and showed how such factors could be taken into account. Their calculations indicated rates of return comparable with returns on physical capital. Actual rates of return varied between 8 percent and 20 percent; the calculations were based on data for 1939 and 1949 in the United States and for 1963 for Great Britain. Becker made separate calculations of the returns for white males, Negroes, women, and college dropouts. These two works provided a convincing theoretical discussion of rate-of-return analysis and refutation of many criticisms of the approach as well as a discussion of the policy implications of the estimates. One of the criticisms frequently made is that estimates of the benefits of education include only direct benefits and neglect external or "spillover" benefits which affect other members of the community. No one has succeeded in accurately measuring the extent of such external benefits, but Weisbrod

(1964) discussed the problem and showed how migration data could be used to measure geographical spillovers.

The earliest work on the economic returns of education was done chiefly in the United States, but there are now a number of comparable studies in other countries. Podoluk (1965) and Wilkinson (1966) analyzed the relations between education and earnings in Canada. Klinov-Malul (1966) estimated the returns to educational investment in Israel, and Bowman (1965) compared rates of return in India and Mexico with the American evidence.

The fact that education has a positive effect on lifetime earnings and occupation plus the existence of significant differences in the rates of return to different types of education help to explain increases in the demand for higher education, individual choice of occupation, and regional and racial differences in income. Blaug (1966a) showed that calculations of private rates of return can be used to explain variations in the supply and demand for university places, and Wilkinson (1966) developed a theory of occupational choice linked to differences in income yields of different types of training. Becker (1961), Fogel (1966), and Lassiter (1965) examined racial differences in the returns of education, and Colberg (1965), Lassiter (1965), and McKie (1965) also compared the relation between income and education in Northern and Southern states.

Economic implications of school dropout were discussed by Weisbrod (1965), who estimated the costs and benefits of a program to prevent high school dropout in the St. Louis district. Duncan (1965) linked variations in school attendance rates with the labor market situation and showed that the dropout rate increases when jobs are plentiful. During periods of recession, however, it is those with low educational attainment who are most likely to be unemployed. Increasing educational opportunities, therefore, figure largely in the antipoverty program as a result of analyses of the characteristics of the poor and unemployed.

Additional References: Becker and Chiswick (1966); Committee for Economic Development (1965); Hirsch and Segelhorst (1965); Innes, Jacobson, and Pellegrin (1965).

Investment in Human Capital

Formal schooling is an important, but certainly not the only, way to increase the value of human resources. Human capital formation includes health and welfare activities, as well as informal education and labor training. Alternative methods of raising the quality of the labor force have attracted increasing attention. Becker (1964) examined the private and social benefits of on-the-job training as well as formal education, and Borus (1964) and Somers (1965) analyzed industrial training programs in a cost-benefit framework, showing that retraining is a profitable investment for the individual or society. Mushkin (1966) proposed a national re-

training scheme, available for all workers, to solve the problem of skill "obsolescence." Sen (1966) emphasized the complementarity of education and job experience, showing through U.S. census data for 1960 that earnings typically rise with age for every level of education.

If a country's stock of human capital is affected by education, it is obviously affected also by the migration of educated people. The United States has attracted highly educated immigrants, particularly scientists and technologists, and this phenomenon has been called the "brain drain" in countries which lose a high proportion of their qualified manpower through emigration. However, it is not easy to estimate the balance between the costs and benefits of migration. Grubel and Scott (1966) attempted to analyze international flows of human capital and demonstrated the inadequacy of collected data. Johnson (1965) argued that for Canada the term *brain drain* is a misnomer as it is not obvious that costs outweigh benefits. The effects of interregional migration were discussed by Colberg (1965) in a study of the contribution of human capital to the development of the Southern states.

Bowman (1966) provided an admirable review of the main analyses of human capital formation; this is, in her view, so significant a development that she calls it "the human investment revolution in economic thought." Not all economists would agree, however, that the recent emphasis on investment in education has been beneficial. Balogh (1966) argued that the analogy between investment in human and physical capital has produced misguided educational policy in underdeveloped countries.

Additional References: Grubel and Scott (1966a, b); Nelson and Phelps (1966); Schultz (1965); Somers and Stromsdorfer (1965); Weisbrod (1966); Wilkinson (1966).

Contribution of Education to Economic Growth

Much of the present interest in the economics of education stems directly from a preoccupation with theories of economic growth and development. The discovery that increases in physical capital and labor did not, by themselves, explain economic growth led to an analysis of the factors determining the "residual," in particular the role of education and technical knowledge. One of the first attempts to measure the contribution of education to growth was made by Denison (1964), who argued that about 23 percent of recent increases in U.S. national income was due to the increased education of the labor force; Bowman (1964) revised this estimate by taking account of certain neglected factors and suggested that only 18 percent was due to education. Other critics have denied the possibility of quantifying the contribution of education to growth, but it is fairly generally agreed that education is a vital element in economic development. An extremely lucid summary of alternative methods of measuring the contribution of education to growth was given by Bowen (1964).

McClelland (1966), using electricity consumption as an index of development instead of the more usual national income measures, showed the high degree of correlation between secondary school enrollment and economic development in 36 countries, and argued that expansion of secondary education has, in the long run, accelerated growth. Balogh (1966) argued, however, that the emphasis on educational expansion in many low-income countries had produced stagnation rather than growth. Vaizey (1966) questioned whether education contributed to economic growth and suggested that the concept of education as "investment" was unlikely to prove a good guide to appropriate levels of expenditure.

One of the most valuable contributions to the literature on the economic role of education was a collection of 22 important theoretical and empirical studies (Anderson and Bowman, 1965) covering such problems as the imperfections of labor markets in underdeveloped countries, the balance between vocational and general education, the value of formal education versus agricultural extension and adult literacy programs, and a historical analysis of educational growth in the United States, Britain, and Russia.

The question of the right balance between technical or agricultural training and general or academic education in the secondary school curriculum is an urgent problem in Africa and Asia. Foster (1965) attacked the popular idea that greater emphasis on vocational training will promote faster growth in Africa and emphasized the dangers of developing vocational training faster than job opportunities. Blaug (1966b) examined the costs and benefits of adult literacy campaigns and discussed economic criteria for choosing between formal and informal education in developing countries.

Additional References: Cerych (1965); Elliott (1966); Myers (1965); Myint (1965).

Educational Planning

The belief that investment in education will generate growth, together with the increased demand for education throughout the world, has made it necessary for governments to make detailed projections of the future scale of the education system. Such educational plans range from simple extrapolations of the private demand for education, with discussions of the implications for teacher supply, to full-scale target forecasts, geared to the interdependence of the educational system and the occupational structure of the labor force has been so frequently emphasized that many countries, both advanced and underdeveloped, have drawn up detailed estimates of future manpower requirements which are used to determine the rate of expansion of secondary or higher education. There is a steadily growing literature on the conceptual and technical problems of manpower forecasting and its implications for educational policy.

Bombach (1965) explained how long-run forecasts of labor requirements can be derived from national income forecasts and extrapolation of past productivity trends and recommended this as a powerful tool for planners. The most ambitious attempt to apply manpower forecasting techniques to educational planning was made by the Mediterranean Regional Project of OECD. The methodology adopted by the six MRP countries (Italy, Greece, Yugoslavia, Turkey, Spain, and Portugal) was described by OECD (1965b) and subjected to a technical evaluation by Hollister (1966). The International Labor Office commissioned a series of studies of manpower planning, published as a symposium (Sinha, 1965) and including a valuable critique by Hollister. Manpower planning and the utilization of skilled manpower in the United States were discussed by Lester (1966). A rather different but related approach was suggested by Harbison and Myers (1965), based on links between the rate of growth of high-level manpower and the rate of growth of national income. Their method essentially involved subordinating educational expansion to the achievement of specified manpower goals. It is assumed that future requirements can be assessed and that all countries follow similar "manpower growth paths."

These assumptions of manpower-oriented planning have been criticized, as has been its neglect of differences in the costs of alternative ways of educating highly skilled manpower. Rado (1966) summed up many objections when he described manpower planning as "a flourishing practice with virtually no theory." The widespread adoption of the approach can, however, be seen from the 10 country case studies introduced by Harbison and Myers (1965). Cash (1965) and Rado and Jolly (1965) pointed out some of the dangers of the manpower planning approach for African countries; the emphasis in many forecasts on high-level skills may result, in the African context, in neglect of middle-level, secondary education.

Cost-benefit analysis often is advocated as an alternative approach for the educational planner. Much of the literature suggests that manpower planning, cost-benefit analysis, and projections of the private demand for education provide alternative methods of educational planning. In most countries, however, planners are pursuing more than one objective and need to consider more than one approach. The strengths and weaknesses of the various approaches have been discussed by Adams (1964) and UNESCO (1964).

Educational planning frequently involves the use of fairly sophisticated mathematical methods; one recent innovation is the development of mathematical models for planners. Econometric models of the education system were described by Moser and Redfern (1965) and OECD (1965a). Chance (1966) demonstrated how linear programming models could be used as a tool for educational policy making.

Additional References: Cartter (1965, 1966); Curle (1966); Layard and Saigal (1966); Lyons (1965); OECD (1966); Porter (1965); Roberts and Smith (1966); Stone (1965, 1966); Vaizey and Knight (1965).

Educational Finance

There has been continuing interest in the economic implications of alternative methods of financing education. One of the questions attracting most discussion is that of public versus private finance, which was a burning issue in the nineteenth century (West, 1964). A number of recent proposals have been made that state or national governments should finance education by specific education "vouchers" to parents rather than by direct subsidies to the schools themselves. Danière (1964) and Laird and Schilson (1965) advocated such a scheme in America; Peacock and Wiseman (1964) and West (1965) made similar proposals for public finance and private provision in Great Britain. They suggested that adoption of a voucher scheme would have the advantages of attracting increased funds for education, increasing consumer choice, and making schools more responsive to parents' wishes. Stubblebine (1965) also took up the question of public versus private finance; he argued that the maximum finance for education is provided in systems which combine public and private sources.

Closely linked with this issue is the current debate centered around the correct level of fees charged by public or private institutions and the question of whether financing should be by loans or outright grants. Danière (1964) in the United States and Prest (1966) in Great Britain both advocated raising fees to bring them into line with actual costs and subsidizing students by means of repayable loans.

The question of the balance between central and local finance in education has important economic as well as political implications (NEA, 1965). Benson (1965) proposed a number of administrative and financial reforms to increase both equality of provision and efficiency of resource allocation in school systems.

The desire to promote economic growth through investment in education raises many problems of finance. The OECD Study Group (1966) produced a valuable symposium devoted to financial issues, including discussions of alternative methods of finance and control in developed and underdeveloped countries, forecasts of the financial implications of educational expansion, and analysis of the correlation between educational expenditures and national income.

Additional References: Carovano (1966); Goode (1966); Peacock and Lavers (1966).

Analysis of Educational Expenditures

During the last few years the relationship between the educational system and the national economy has attracted more attention than the internal economic analysis of the system. It is perhaps surprising that while so much attention has been focused on the economic arguments for increased investment in education, there has been little research on the internal pro-

ductivity of the education system or the relation between costs and quality in schools. A few recent studies have explored these problems, and attempts have been made to analyze the determinants and effectiveness of educational expenditures.

The measurement of productivity requires the definition and quantification of inputs and outputs, a task which has been difficult for education. The problems of measuring the productivity of higher education (that is, the ratio of outputs to inputs) were discussed by the OECD Study Group (1964a), and many of these arguments can be generalized to other educational levels. The main difficulty is in finding adequate measures of school output which can be related to costs. Kershaw (1965) emphasized that "until we define output we can never know whether we are combining resource inputs in an optimum way." Woodhall and Blaug (1965) discussed the general problems of measuring educational output and productivity for British universities. Output was measured in terms of graduations, with three weighting systems to correspond with different criteria of educational quality, and then was compared to increases in real inputs. The conclusion was that productivity had declined, and various methods of increasing productivity were discussed.

Welch (1966) discussed the determinants of the quality of schooling as measured by the lifetime earnings of school-leavers; he concluded on the basis of multiple-regression analysis that the two most important determinants of quality were teacher qualifications, as reflected by salaries, and school size. The relationship between school size and costs per pupil was investigated by Riew (1966), who found evidence of economies of scale in school operation.

Additional Reference: Edding (1966).

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CHAPTER III

The Organizational Component in Education

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In educational research the use of the word *organization* carries two distinct and only distantly related connotations. One concerns patterns of deploying pupils, teachers, or other organizational components, as in team teaching, in order to achieve some specified organizational goals. Relevant research in education is reviewed in a later chapter by Nystrand and Bertolaet. The second connotation applies to the nature of educational organizations as they are and the variables that make them so. This is a new field, the impact of which is barely beginning to be felt upon educational research. The extent of the writing in other fields, however, is indicated by the appearance of the massive *Handbook of Organizations* (March, 1965), which, according to its editor, "could not have been written 15 years ago; certainly it will not survive another 15" (p. xv).

Organization theory has been considered a growth point at the present time in the development of the social sciences. In education, the study of organizations has evolved as the focus for the conceptual groping that once characterized the era of "the interdisciplinary approach to administration." Research in this *semidiscipline* (the term is from March) outside of education is reasonably plentiful, sometimes insightful, and usually so diverse as to defy cross-communication among the component social sciences. Hoping to provide that link, Pugh (1966) offered a paper that traces the main contributions of each of six groups to the development of organization theory as an emerging "quasi-independent science": management theorists, structural theorists, group theorists, individual theorists, technology theorists, and economic theorists. Though to the educational researcher the contributions of some of Pugh's groups may appear irrelevant, his final point cannot: successful attempts to study work organization will be those that consider the interdependence of three conceptually distinct levels of analysis of behavior in organizations—(a) organizational structure and functioning, (b) group composition and interaction, and (c) individual personality and behavior (p. 248).

In the previous review of this subject, Lipham (1964) pointed out that the central motif of research on administrative behavior was the use of theoretical constructs of the social sciences. This trend has continued so that much research concerning the functioning of educational organizations appears to be based to some degree upon valid theory. Some of these studies, however, lack relevance to the processes being studied and therefore appear to have limited usefulness. On the other hand, there is a promising trend toward taking account of the distinctive organizational variables relevant to the functioning of educational organizations by means of designs that

are securely rooted in constructs of the sociobehavioral sciences. This trend is particularly evident in studies of the processes of change. Particularly refreshing is the recent focus of attention on systems dynamics. Greater cognizance is being taken of the interaction of factors affecting behavior in educational organizations which arise not only within the system and its subsystems, but which also impinge upon the organization from its societal suprasystem. The substantive interests of researchers are revealed in the emphasis on studies of organization climate, bureaucratization, motivation and commitment, change processes, communication processes, and decision-making processes. The research to be reviewed in this chapter has been organized in terms of these interests.

Organizational Climate

An early impediment to the study of organizations was the difficulty of conceptualizing the totality of the organization, as distinct from its component elements, a difficulty which has been particularly marked in the affective domain. Thus students of "organizational stress" or "growth" frequently are found to be studying not the stress or growth of the organization as such, but of the individuals, roles, and subgroups *within* organizations. As soon as it becomes cognitively possible to consider organizational affect, a methodological problem emerges: how can affective variables of organization be studied apart from studying individual persons in the organization? Perhaps it is not yet possible, but in the meantime it must be recognized that particularistic research purporting to study organizational affect will at best yield inferences.

In the early 1960's Halpin and Croft (1963) grappled with the conceptual problem of organization affect and translated it methodologically into a questionnaire instrument developed factor analytically to yield subscale scores and climate profiles. At least 15 completed studies using the Organizational Climate Description Questionnaire (OCDQ) were reported from 1964 to 1966. Many more went unreported and large numbers were reported to be in progress, so that by date of this publication well over 100 OCDQ studies will have been completed. The list of climate correlates seems endless.

Conceptual Structure of Climate

Discussing the first phase ($N=165$ schools) of Knill's (1965) two-year research and dissemination project in Alberta, Canada, Andrews (1965) concluded that "the overall climate does not predict anything that is not better predicted by the subtests" (p. 333). The fact that many of the studies reviewed gained in precision only as they moved from overall climate scores to individual subtest scores prompts one to regard the climate variable merely as a somewhat blurred Esprit score. (Esprit is one of the eight subtests.) Had more researchers directed their energies toward the struc-

ture and measurement of the climate concept, it is possible that a considerably more refined operational definition would have resulted. This in turn might have crystallized the many substantive relationships that force of reason suggests must obtain with this variable, and could have enlightened countless normative surveys. Instead, researchers in dozens of normative and correlational studies uncritically accepted the instrument and its climates in the original form.

By sheer bulk of evidence, organizational climate has become recognized by educational administration researchers as a variable of major importance touching every aspect of their discipline. Organization theorists, including early users of the term *organizational climate*, have made notable progress in elaborating the concept in other contexts (see Argyris, 1964; Stogdill, 1965). Why was only one operational instrument used in education and why was the use so invariable? It would appear there exists an instrumentation shortage everywhere in the study of organizations: when one does appear it is lionized to death. Despite the limitations stated by Andrews, his report—which many read as “here is a test possessing established validity”—no doubt contributed significantly to the widespread and often unquestioned use of the OCDQ. Clearly in this test-hungry domain of organizational affect there is opportunity for greatly increased contribution from the social psychologist and psychometrician.

Organizational Personality and Cohesion

There can be little doubt that climate, atmosphere, or feeling-tone is now established as a relevant condition in the study of organizations. Probably a significant proportion of the variance in studies of organizational dynamics (Brown, 1967b) could be accounted for with climate scores. Defining this variable, however, is not easy. Many authors have claimed that climate is to the organization what personality is to the individual. Operationally, however, the analogy is weakened by restricting the OCDQ to social interaction between principal and teachers; modern personality theory is not limited to studies in affectivity. With this limitation, however, correlates of the OCDQ indicate that it has some similarity to a personality test. With open climate comes a general state of euphoria (Andrews, 1965). Like personality, climate is relatively stable over time: the scores of 88 Alberta schools changed only a little (toward openness) over a 12-month period (Wilson, 1966). Climate is sensitive to cultural and socioeconomic impairment; schools in disadvantaged areas showed either less openness or less desirable subscale scores (Feldvebel, 1964; Gentry and Kenney, 1965; Nicholas, Virjo, and Wattenberg, 1965). And open climates are found in schools manifesting emergent rather than traditional values (Lupini, 1965). In these respects, climate as estimated by OCDQ scores seems closely allied to organizational “personality.”

In other respects the OCDQ emerges as an estimate of group cohesion. Consider, for example, Andrews' finding that *combined* elementary-second-

ary schools have low climate profiles. Lupini's linkage of high principal-staff congruence in values with low Aloofness and Production Emphasis scores, and Radomsky's (1966) convincing discovery that *variance* rather than level of teachers' open- and closedmindedness (dogmatism) predicted their *level* of open-to-closed climate.

Climate and the Principal

Of the many influences upon the overall feeling-tone or atmosphere of the school, that of the principal's own character and personality has traditionally been held the greatest. Several normative studies have used a personality instrument on the principal and the OCDQ on the staff, presumably to test the old maxim, "As the principal, so goes the school." Considering the crudity of the measuring instruments, the hypothesis appears tenable. Plaxton (1965) reported some correspondence between principal personality and certain OCDQ subscales that describe the principal. Anderson (1965) found a correspondence between principal personality and the overall openness or closedness of school climate: open climate schools tended to have confident, self-secure, cheerful, sociable, and resourceful principals, while closed climate schools' principals tended to be evasive, worrying, submissive, conventional, and frustration-prone. Perhaps, considering the respective climate profiles, they had good reason to be so.

Academic Achievement and Climate

To the tempting question of what kinds of organizational affect are "best," most answers have been expressed in educational, not organizational, terms. The use of educational outputs such as school grades or standardized achievement test scores as an immediate criterion of any "good" organizational characteristic is open to question and, as suggested elsewhere (Brown, 1967a, b), leads to the "cognitive fallacy." The fallacy lies in supposing affective variables of organization to be a necessary and sufficient condition of cognitive success among pupils. Healthy organizational dynamics may be tested against administrative outputs like cohesion and commitment, satisfactions, maintenance (or turnover), leadership acceptance, and so forth. Hopefully these conditions in turn will enable teachers to do a better job, in which instance cognitive variables may ultimately rise. Just as possibly, however, these "good" organizational conditions will enable teachers to implement successfully a faulty instructional program, in which case the cognitive criterion drops, and what is really a successful organization looks bad statistically.

A number of studies report no systematic or enduring link between pupil achievement and overall climate profile (Andrews, 1965; Feldvebel, 1964; Flagg, 1964; Millar, 1965; Radomsky, 1966). Certain relationships between subtest scores and specific achievement tests did obtain significance; partly, it may be surmised, because of the large number of relationships tested.

The achievement of Feldvebel's 900 fifth-graders correlated negatively with Production Emphasis and positively with Consideration. These same subtests, however, correlated in the same order with socioeconomic status, which in turn is known to correlate heavily with academic ability, a factor partialled out by Andrews but not by Feldvebel. The achievement of Andrews' 6,153 ninth-graders was adjusted by removing the effect of academic ability and was found to be related only to the Intimacy subtest, a measure of warm personal interaction among staff. Millar corroborated the Intimacy variable on eighth-graders and found that Aloofness correlated equally but negatively.

Considering the very indirect and tenuous nature of the logical relationship between organizational characteristics and school achievement, any statistical relationship is enlightening: the school as an organization cannot expect to claim more than a small portion of achievement variance. A systems analysis (Greenfield, 1964) recently found that the achievement variance of 2,069 pupils from 88 classrooms of 44 schools in 22 districts was divided as follows: district, 10 percent; school, 3 percent; class, 19 percent; and individual pupil, 68 percent.

Bureaucracy

Two approaches to the study of bureaucracy may be delineated from a review of the research in this field, the dimensional and the case study. The dimensional approach conceptualizes bureaucracy along a series of different dimensions and relates them to specific aspects of educational organizations. This type of study has proved useful to students of educational bureaucracies, but it is evident from the completed studies that the dimensions which have been used require further modification and research in order to improve the validity of this approach. The case study approach examines organizations in depth and devises formulations about different types of bureaucratic structures. Unfortunately all of these studies are only tangentially related to the problems central to bureaucratization, and there is a serious shortage of case studies which relate directly to the study of educational bureaucracy.

Dimensional Studies in Bureaucracy

Studies by MacKay (1964), Punch (1967), and Robinson (1967) used the six dimensions of bureaucracy operationalized by Hall (1961): (a) hierarchy of authority, (b) division of labor, (c) behavioral rules, (d) procedural rules, (e) impersonality, and (f) emphasis on competence. MacKay's study related the bureaucratic dimensions of schools to individual staff member characteristics and to certain measures of input and output. He found that the bureaucratic model tended to be dysfunctional in terms of pupil productivity and that it was not generally descriptive of the school studied. The bureaucratic scores of schools were based on the first five

dimensions because the sixth dimension was found to be unrelated and directly opposed to them: i.e., being high on the first five bureaucratic characteristics seemed to preclude an emphasis on competence. However, MacKay's findings indicated that item by item teachers expressed the view that good schools should be high on all six dimensions. Robinson (1967) related the same six dimensions to the professional orientation of teachers and principals and found that dimensions (a), (c), (d), and (e) were positively and significantly interrelated as were dimensions (b) and (f). In support of MacKay, Robinson also discovered negative and significant correlations between the two groups of dimensions. Teachers and principals were found to disagree on the optimum level of bureaucratization. Teachers desired significantly more division of labor, behavioral rules, procedural rules, and impersonality than did principals. Neither the principals' nor the staff members' professional scores were found to be significantly related to any of the bureaucratic dimensions, but differing significant relationships were observed between the professional scores of principals and staff members and their desire for division of labor, impersonality, and emphasis on competence. No significant relationships were discovered between teachers' professional scores and the desirability of the other three bureaucratic dimensions. On the other hand, positive and significant relationships were found between principals' professional scores and a desire for hierarchical authority, behavioral rules, and procedural rules.

Punch (1967) factor analyzed the six bureaucratic dimensions and concluded that (a), (c), (d), and (e) were not only related but in fact measured only one basic bureaucratic factor. Scales (b) and (f) were also found to be related and suggested a second unrelated factor. Using the first factor only, Punch was able to explain variations in bureaucracy within elementary schools by examining the leader behavior style of the principal. The two factors would probably be necessary for conceptualizing the bureaucratic structure in secondary schools. Hartley (1964), using a broader concept of dimensions than the aforementioned six, measured the relationship between teachers' perception of bureaucracy and their satisfaction, conformity, and effectiveness. No significant relationships were found.

Case Studies in Bureaucracy

Blau, Heyderbrand, and Stauffer (1966) used the case study method to analyze the interrelationship among four structural attributes within small bureaucracies. It was expected that a professional staff would reduce the need for many managers, but they found that the need actually increased. They also suggested that although bureaucratic structure can become dysfunctional as bureaucracies increase in size, this disadvantage can be overcome by the appointment of sufficient administrative staff. As their findings probably apply to educational organizations, this study shows a research direction for students of educational bureaucracy.

The Direction of Future Research

A review of the research in this field not only reflects weaknesses in the completed studies but also indicates definite directions for future research. There have been a plethora of studies using Weber's description of bureaucracies to analyze the structures and functions of organization. Other researchers have adopted the clinical approach, but few of these studies have any direct bearing on the problems of educational bureaucracy. What seems to be needed are studies which combine the factorial-statistical approach and the clinical-processual approach within the same organization. In-depth studies which relate the bureaucratic structure to its processes not only should result in relevant formulations about the nature of educational bureaucracies but also should reveal important questions which could be pursued by future researchers.

There are a number of research areas which have been neglected by students of educational bureaucracy. Few studies comparing educational organizations with other organizations have been undertaken. An initial attempt at such a study was made by Schauer (1965), but more comprehensive research is warranted in this area. Most studies have emphasized the weaknesses inherent in bureaucracies, but the strengths of the bureaucratization of educational organizations seem to have been neither formulated nor studied. We appear to know virtually nothing about bureaucratic responses to the political pressures of society and to the increasing demand for specialization, both of which must affect organization mechanisms. It would appear that a particularly useful approach would be to develop and test hypotheses based on the conception of Katz and Kahn (1966) that bureaucracies are essentially open systems trying to behave as though they were closed systems.

Organizational Motivation and Commitment

Organizational motivation appears in the literature as an area of considerable activity. Administrators continue to seek those conditions that will enhance the realization of institutional goals. Social scientists have asked whether organizational motivators possess an identity of their own and whether it is possible to speak of the motivation of an organization *per se*, as distinct from its component groups and individuals.

Katz (1964) offered a comprehensive paper on the motivational basis of organizational behavior in which he developed a model based upon behavior requirements of an optimally functioning organization. From three organizational requirements—personnel maintenance, dependable role performance, and innovative and spontaneous behavior—he elaborated certain motivational patterns which may be expected to satisfy organizational needs. What could be described as legal motivators, instrumental motivators, and ego motivators (self-fulfillment through identification with task or institution or both) form the basic structure of a system of organizational condi-

tions under which respective motivational patterns could be enhanced. Katz illustrated how existing motivational research is accommodated by this model; it would be surprising if it did not in turn generate considerably more, considering the interest it has attracted in educational administration (e.g., Abbott, 1967).

As earlier studies showed the effect of group cohesion upon productivity to be either positive or negative depending upon direction of commitment (sometimes called induction), the need to study commitment became obvious. Katz and Kahn (1966), basing their judgment upon studies conducted in industry, believe the concern over negative effects to be exaggerated. Possibly, however, the commitment variable is more complex than a simple positive-negative notion would imply. From studies conducted in educational organizations one may infer commitment or direction of goal-orientation to run validly in several positive directions among members of the same organization (Griffiths, Goldman, and McFarland, 1965; Smith, 1966).

Smith studied an educational research center and labeled his subcultural prototypes "the organization man" and "the research man." The former expressed commitment to the organization as a corporate entity and responded to status stimuli in terms of level of administrative authority; the latter's commitment was to the task or discipline, and his response to communications was conditioned by the sender's recognized research (not bureaucratic) status. Griffiths, Goldman, and McFarland conducted a large-scale study of teacher mobility patterns in the city of New York and found one teacher in eight (particularly men) committed to upward mobility within the organization. Two thirds were task-committed teachers of low mobility interested in teaching and in their pupils. Another 5 or 6 percent were horizontally mobile and showed primary commitment toward the subject taught. The remaining 15 percent were interested in the benefits of the job, either primarily or as a result of having unsuccessfully sought upward mobility. Should each of these educational subgroups become strongly cohesive, the practical problem to the administrator becomes far more excruciating than simply picking the disloyal units from the loyal.

Organizational Change

Many of the early studies on change in education followed the pattern of innovation research found in anthropology, medicine, and rural sociology. This emphasis resulted in largely particularistic studies of the individual innovator, of characteristics of a particular innovation, or of various diffusion processes. The problem of this approach to organizational change was forcefully stated by Katz and Kahn (1966): "The major error . . . is to disregard the systematic properties of the organization and to confuse individual change with modifications in organizational variables" (p. 390).

A recently developed taxonomy (Bhola, 1965) should help researchers avoid that sort of confusion. The scheme would classify research and theory in innovation by using a vertical axis to depict the content of questions which might be raised in this area and a horizontal axis to represent the stage of development on the continuum of knowledge at which completed research might fall.

Carlson (1965) cited three barriers to change in public schools: (a) the absence of a change agent, (b) a weak knowledge base, and (c) the "domestication" of public schools. In Carlson's view, innovation in education has been retarded by the imposition of the function of advocacy for change upon a person whose own practices are the target. In referring to the weak knowledge based he asserted that some of the more successful change-agent prototypes, such as the county extension agents, have been backed by extensive research demonstrating the merits of the proposed innovations. Similar backing has been much less in evidence in education. Carlson used the term *domesticated* for organizations which cannot select the clients and whose clients must accept the service, thereby reducing the struggle for survival, increasing the stability of the organization, and minimizing the necessity for change.

Kimbrough (1966) also postulated that leadership for change in education takes place within the dynamics of interacting social systems in which the school is not insulated from the political environment, as some educators would like to think. A knowledge of community power systems is required not only to initiate and legitimize change, but also to resist changes which might be detrimental to the school. In a comparative study of six school districts in Florida, Johns and Kimbrough (Kimbrough, 1966) found that the power systems of the school districts varied. There was greater conflict in districts of higher financial effort, which may point to the need to re-examine the high value which has traditionally been placed on consensus. Only 22 percent of the influentials in the power structure of high effort districts were native born as compared with 78 percent native born in the low effort districts. The low effort districts had a much higher incidence of kinship ties in the power systems than was found in the high effort districts.

Gallaher (1965) pointed out that innovation cannot be divorced from the vital interrelationships existing between systems and suprasystems. Since the school is a service organization, the lay client group and the professional functionaries are in constant tension as to the legitimation of authority to determine the goals of the system, while internal problems faced in the school setting are often best met by innovations derived from the outside suprasystems. Gallaher suggested that this dilemma of local versus wider suprasystems may well be one of the most difficult problems faced by educational innovators.

Andrews and Greenfield (1966-67), who proposed the thesis that innovation in education is not so much the adoption of objects by individuals as it is the acceptance of ideas by an organization, are currently conducting a study to test the hypothesis that an organization can achieve stability and

a high rate of change at the same time. A schematic model of organization functioning and change environment with a set of second-order system properties which he labeled "organization health" was developed by Miles (1965), who is presently attempting to test it empirically.

Researchers have produced a number of promising concepts concerning organizational change which more fully recognize variables arising from the dynamics of interacting social systems. Empirical evidence is urgently needed to test the hypotheses which have been formulated.

Communication

The fact that research on communication patterns and processes as aspects of organizational behavior is relatively sparse may have been explained by Smith (1966), who pointed out that an analysis of the communications patterns of an organization is indeed an analysis of the social dynamics of that organization. In a case study of a research organization, Smith hypothesized that communication patterns are expressions of the perceived status structures and the functions of the organization. Using an intensive interview technique, he found support for his hypothesis and concluded that most communication takes place within groups of persons with shared statuses. The greater the number and variety of statuses, the greater were the barriers to communication within the organization.

Using a modification of the critical incident technique in an attempt to develop a meaningful functional model of the communication process, Wilson (1964) identified and isolated eight elements affecting communication within a school organization. These eight elements were then viewed as falling into two dimensions: an operational dimension, involving the more mechanical, procedural aspects of communication; and an organizational dimension, encompassing those aspects relating to the establishment and maintenance of the organization and the structure of the communication process. Investigating the different communication networks that develop around different issues within a school, Greenham (1964) implied that the nature of the issue itself appears to be the major factor in determining the pattern and mode of communication.

Researchers studying educational organizations have largely ignored pertinent questions concerning organizational factors and personal factors which may facilitate or impede communication, such as those identified by Erickson and Pedersen (1966). Typically overlooked have been questions concerning channel overloading as a function of organizational size, ecological impediments other than status differentials, coding discrepancies as a function of divergent values, and personal factors related to the effectiveness of transmission and reception. In short, to answer crucial questions, there is a need to study personal and organizational factors affecting the amount and fidelity of transmission and receptivity of various kinds of communication in educational organizations.

Decision Making

A major contribution to the study of decision making has been Kimbrough's (1964) book in which considerable research on decision making was brought together, providing a bank of knowledge derived from research and clearly indicating the complexity of the interrelationships of the organizational, social, and political variables involved in the decision-making process. Other recent research into decision-making processes reveals several interesting techniques in addition to the traditional methodological approaches set out by Bell, Hill, and Wright (1961) as (a) the positional approach, (b) the issue analysis approach, (c) the reputational approach, (d) the social participation approach, and (e) the personal influence approach.

Although it has been sharply criticized by behaviorists in political science, the positional approach has been used advantageously by Porter (1965) in a monumental analysis of social class and power in Canada, and by Reinke (1964) in exploring the relationship between the authority structure and the centrality of decision making in school systems. Reinke concluded that the authority structure and centrality of decision making were independent variables but were clearly related. Antley (1966) was concerned with the characteristics of administrators as decision makers, with particular attention to the nature of the relationship between the creativity of individual administrators and the effectiveness of their decisions. Although the definition of creativity as problem-solving ability and the general skills and attitudes relating to general administrative ability seems much too broad, the findings are interesting. Effective decision making correlated highly with operational knowledge of the administrative job, a finding which has obvious implications for the training of administrators.

The "snowball technique" of the reputational approach was used by Knill (1967) in a series of studies on a number of aspects related to the influence structure of a city with a population of 10,000. Housego (1965) used the issue analysis approach in an intensive study of the behavior of influential individuals in making the political decision to bring about an integrated teacher training program in the Province of Saskatchewan. A reputational study of the same individuals conducted in conjunction with the issue analysis revealed congruence in the two approaches in identifying the influential individuals. In this study, the myth that administrators do not participate actively in policy making was clearly exposed.

A combination of the reputational, social-participation, and personal influence approaches used by House (1966) in studying the influence structures of a single comprehensive high school revealed that a different influence structure functioned in relation to each of 12 different organizational tasks. The degree to which individuals desired to participate in decision making was found to be related to the degree of satisfaction experienced by individuals with current practices in regard to specific tasks.

Organizational Modes

Researchers have also been interested in studying the efficacy of organizational modes of decision making. Bridges (1961) tested four modes of involving teachers in decision making—announcing, testing, soliciting, and delegating—and concluded that the soliciting mode was the most effective. He also concluded that school size tends to determine the degree of teacher participation in decision making and that the combination of small schools and older principals would tend to result in the greatest amount of teacher participation.

A very interesting experimental study by Rustigan (1965) to determine the relationship between the mode of decision making and the possibility of achieving rational decision was designed to replicate in an operational context small-group research conducted in a laboratory context. Three groups of five teachers which functioned as the entire teaching staffs of three small schools were used as the experimental groups. The three experimental problems were real problems facing each of the school staffs. Rustigan concluded that the greatest possibility of achieving rational decisions entirely independently. The decision group procedure in which problem solving was done independently following group discussion ranked second, and real group procedure where consensus was sought in group discussion ranked last. These conclusions agree with the results of previous small-group laboratory experiments.

Affect and Structure

Otto and Veldman (1966), concerned with the affective aspects of decision making in elementary schools, studied the staffs of 38 elementary schools in six school systems, using the OCDQ and the McLeod Control Structure Description Questionnaire. Although significant relationships were found between principals' perceptions of the allocation of decisions and principals' climate scores, and between teachers' perceptions of the allocation of decisions and teachers' climate scores, substantial disagreement appeared between principals and teachers in the same schools on the appropriate allocation of decision-making power and influence and on most of the climate dimensions. Thus principals and teachers did not use a common frame of reference for viewing their relationships with each other. Also, they saw decision making and school climate from dissimilar vantage points. Perhaps the most startling finding of this study indicated that there was no clear relationship between teachers' evaluation of organizational climate and their perceived general autonomy.

Combining an interest in the affective factors and the rationality of decisions, Ziegler (1964) interviewed superintendents, teachers, and lay persons to determine the operational factors involved in decision making by school superintendents. His findings indicated that the process and

time elements for decision making were considered to be situational, dependent upon such factors as the complexity of the problem and the personalities, backgrounds, and expectations of the persons involved.

Emergent Direction

Organization in Education

Is organization in education different from organization elsewhere? By responding primarily in the negative, several researchers have thereby allowed themselves access to theoretical models, research designs, and instruments used in the study of other types of organizations. Thus MacKay (1964) made use of Hall's operational dimensions of bureaucracy, and Kitchen (1965) used the value concepts and instrumentation of Florence Kluckhohn.

Assuming the uniqueness of educational organizations, on the other hand, has had two effects. One is the development of instruments and designs that have penetrated the organizational problems facing educational administrators in particular (e.g., Bridges, 1964; Darling, 1964; Wallin, 1967). The second effect of emphasizing uniqueness is not so productive. Productive research may legitimately begin with immediate administrative problems, but work that begins and ends at that point cannot readily be generalized because of its local and particular character. In appealing for research that is generated out of scientific problems, Pugh (1966) reiterated a condition basic to the development of any discipline: administrative-generated research may give interesting pointers and insightful analytic concepts, but the hazard is that "a continual diet of management oriented problems . . . with their almost inevitably *ex post facto* design, at best distorts, and at worst frustrates, development" (p. 247).

In their study of the social psychology of organizations, Katz and Kahn (1966) saw the school as being unique. They developed a typology of organizations in modern society: (a) productive or economic organizations concerned with creating wealth, manufacturing goods, and providing services; (b) maintenance organizations devoted to socializing or rehabilitating people for roles in other organizations and society; (c) adaptive structures to create knowledge, develop theories, and apply information; and (d) managerial or political organizations to adjudicate, control, and coordinate people and systems. While some characteristics are common to all classes of organizations, others are specific to one only. Schools fall into the maintenance class: universities, in the adaptive-creative class. In their study of organizational socialization, Katz and Kahn provide a lucid theoretical exposition of the means by which the impact of any organization's character and latent purposes become internalized by its inhabitants. Further interest in this phenomenon in education is shown by Brown's (1966) research into the organizational socializations of school administrators shown in their projected perceptions.

Bidwell (1965), analyzing the school as a formal organization, identified four attributes that characterize the school: (a) the involuntary nature of the student role, (b) the professionalization of staff roles, (c) the peculiar form of bureaucracy that results from the combination of the need to rationalize procedures and outcomes with marked variability in clientele, and (d) the power pressures from local constituents and higher governmental bodies. Bidwell's analysis was focused chiefly upon the school rather than upon the overall educational organization or "education industry." Thus he saw the principalship as the key role for purposes of organizational analysis and identified "structural looseness" as one of the characteristics of the organization. Several studies of educational organization at the *district* level, however, reflect the traditional view of the superintendency as the key role with a low level of change-proneness as a predominant characteristic.

Integrated Multilevel Design

It would be misleading to suggest that educational administration researchers are developing a massive attack upon the nature and functioning of organizations in education. This review was aided by a canvass of 60 universities generally acknowledged as competent in the field of educational administration, chiefly the University Council for Educational Administration centers plus a few universities in Canada and the United Kingdom. The canvass called for reports, abstracts, or titles of staff and student research under several relevant topics; purpose was stated. Although 47 percent replied, which the authors gratefully acknowledge, only 30 percent were able to forward materials or information, of which less than half was pertinent. Reasons for this lack of research are not hard to find: for example, the newness of this "semidiscipline" and the immediate need for problem-oriented research have been mentioned. In educational administration, moreover, the preponderance of research is student research; in this respect the increasing accessibility of students to research-oriented sociobehavioral programs gives fair promise for the development of the discipline. Meanwhile, few students have the time, resources, or understanding to begin the assault on fundamental problems of educational organization. An even more compelling factor lies in the difficulty faced by any independent researcher of elaborating an integrated design for organizational research over the full range of analytic levels—individual, group, and organizational. Cooperative programs are clearly indicated.

Examples of integrated multilevel design at varying degrees of comprehensiveness are found in three recent books reporting research in industrial settings, the impact of which is already being felt upon studies in educational administration. *Organization and Innovation* (Argyris, 1965) reported a design that is rather more clinical than factorial and examined processes rather than structures. *Managers, Employees, Organizations* (Stogdill, 1965) presents an exhaustive report of a factorial study

of 2 to 10 industries in each of six groups of industry. Using an impressive battery of tests, Stogdill examined positions, work groups, and organizational patterns within and between industries. Certain of the instruments and techniques were recently used in a research and development project conducted by Brown (1967a) in 170 schools.

Using a clinical case study in combination with a large-scale statistical design, Kahn and his associates (1964) examined organizational stress. The procedure was to focus upon an individual's perception of his own role in an organization and to contrast this with the descriptive evaluations of his role made by his "significant others" in order to derive each individual's role set. Indices of role conflict and ambiguity were based on and assessed through interview and questionnaire data. Using the well established premise that much psychological stress can be traced to the interaction of internal dispositions with socioenvironmental factors (especially significant others), they analyzed the kinds of stress common to large and complex organizations. One type of stress common to educators, particularly to middle-echelon administrators, was termed role-ambiguity stress. Insights and designs from this study were among those utilized by House (1966) in his analysis of interpersonal influence relationships within educational organizations.

The number of professional researchers in educational administration and the number in cognate social sciences doing research on educational administration problems now forms an impressive group. Research that is ambitious in its design and penetrating in its conceptualization is beginning to characterize that group. One emergent direction has been toward research that attends to organizational variables at all three levels of analysis and that integrates the depth advantage of the clinical-processual approach with the universality and security of statistical-factorial approaches. A related direction is one that Matthew Miles terms the clinical-experimental approach used in his ongoing organizational development project (Benedict and others, 1966).

One reason for the urgency of organizational research in education is the immensity of practical problems confronting school administrators today and the realization that their solutions will be indicated in organizational terms. Perhaps a better understanding of organizations will be accompanied by a clearer perception of the applicability of organization theory to questions of how to organize human resources.

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CHAPTER IV

The School Administrator

DONALD A. ERICKSON

Investigations pertaining directly and sometimes indirectly to the school administrator (viewed here as the formally designated leader) are discussed in this chapter in terms of research issues which, in the reviewer's judgment, are particularly significant at the present time. Such a selective approach is perhaps preferable to a more exhaustive but less analytic recital of studies, even if some worthwhile work must be omitted in the process. The following passages refer, with a few exceptions, to studies reported between January 1, 1964, and December 31, 1966.

Teacher Reports of Administrator Behavior

In the light of the widespread use of description questionnaires in investigations of administrator behavior, several considerations raised by Charters (1964b) may warrant close attention. Charters' work was prompted by dramatic findings in Ovid N. Hunter's unpublished dissertation, discussed at some length in Charters' report. According to Hunter, teachers and board members in large school systems consistently rated their superintendents lower on Initiating Structure and Consideration (dimensions of the Leadership Behavior Description Questionnaire, hereinafter identified as the LBDQ) than did their confreres in small school systems, while superintendents in large systems rated themselves *higher* than their small-system peers were disposed to do. Such relationships suggested that the LBDQ estimates were governed in large measure by the characteristics and circumstances of the raters themselves, rather than by the administrator behavior the LBDQ purported to reflect.

Reanalyzing data from earlier investigations, Charters educed no repetition of Hunter's pattern, and closer scrutiny of Hunter's evidence revealed no important clues to explain the disconfirmation. In a partial replication of Hunter's work, the associations once more failed to reappear. Furthermore, in eight school systems that were sampled twice in three years, once in Hunter's study and once in the replication, the responses reflected no more than a chance relationship over time and, indeed, a high degree of instability. Superintendents and teachers did not even agree concerning the *direction* of the changes which might have occurred, an anomaly that defied understanding as long as the reports were assumed veridical.

Reinspecting Halpin's (1959) pioneering work with the LBDQ, Charters found that the validity of the questionnaire had been predicated largely on

significant between-system differences in scores as shown in analyses of variance. But the between-system differences might as logically have been attributed to the respondent groups as to the administrator. There was no firm evidence concerning the construct validity of the LBDQ, and occasional relationships found between the questionnaire dimensions and other variables merely emphasized the linkage of the ratings with rater idiosyncrasies. The ability of observers to discriminate among the various behaviors of the observed was but shakily indicated, and halo was typical. Charters described as "theoretically weak" the prevailing explanation for disagreement between staff respondents and board members: that the administrator varied his behavior as he moved from group to group. (The explanation is somewhat analogous to tossing a stone over one's shoulder into a tree and insisting that whatever leaf one hits was selected in advance.)

Charters then attempted to reckon with the fact, often glossed over, that no standard was available for determining when the variance in LBDQ scores was small enough to constitute "agreement" or large enough to constitute "disagreement" for purposes of assessing validity. If the responses were primarily sensitive to administrator behavior, he argued, people with much opportunity to observe this behavior should exhibit greater consensus than people with little such opportunity. But when he categorized his respondents according to the nature and frequency of their interaction with their superintendents, teachers close to superintendents demonstrated no more unanimity than teachers remote from superintendents. In addition, the two groups were comparably affected by halo. Though limited *N*'s were involved in these analyses and several important variables were unsuitable to control, the data did not encourage the assumption that the administrator's actions were the primary force behind the LBDQ estimates.

As one explanation for the apparent lack of LBDQ veridicality, Charters advanced the concept of *institutionalized leadership*. Many operations performed by individuals in small groups, according to Charters, are executed in bureaucracies by impersonal mechanisms, such as rules and regulations, clocks and bells, and an established division of labor. It is tenuous to view these structural functions as the behavior of any individual. Insufficient attention has been given to this idea. In fact, a Leadership Phantasm (Charters calls it "our culturally derived inclination to glorify the power of the individual human agent") seems to characterize much of the relevant literature. In Carlson's (1965) otherwise admirable inquiry, for instance, school district innovation was ascribed repeatedly to the superintendent, as a matter of "*his* rate of adoption," "*adoption of a new practice among school superintendents,*" or "*superintendents who . . . were quicker in accepting modern math*" (*italics added*). Little attention was given to an alternative explanation that fit the evidence well: school districts which had institutionalized innovation tended to hire superintendents with the appropriate outlook (see Fogarty and Gregg, 1966). (In passing, it may be pertinent to note a suggestion in Croft's (1965) data that perceptions of

the principal's behavior vis-à-vis the superintendent were less blurred by structural effects than perceptions of the principal's behavior vis-à-vis the teacher.)

In assessing the validity of another description questionnaire, the Organizational Climate Description Questionnaire (OCDQ), Andrews (1965) found the distribution of school climates for elementary and secondary schools in Alberta to be similar to the distribution in Halpin and Croft's (1963) original study. The climate and subtest scores were stable when derived in two ways, and essentially the same relationships were found in each kind of Alberta school. Andrews concluded that the OCDQ was as valid for other kinds of schools as for elementary schools. There was some evidence, too, of a type of construct validity. The climate subscores were associated meaningfully with teacher characteristics (relatively halo-resistant variables). The OCDQ subtests correlated rather predictably with subtests of the LBDQ—Form XII. But Andrews did not establish the veridicality of teacher accounts of administrator behavior. The evidence indicated a predictable structure in teacher perceptions, but the administrator's actual performance was not necessarily echoed in that structure. While the OCDQ may be uniformly valid in several settings, the four leader-oriented subscores are not necessarily a valid measure of the official leader's performance in any setting. Several of Andrews' findings should be of general interest to scholars. For instance, he found a correlation of only 0.03 between LBDQ Consideration and OCDQ Consideration. Scrutiny revealed that, while items in the former stressed nonauthoritarianism, items in the latter stressed personal assistance. As operationalized in the two questionnaires, Consideration is not a unitary concept.

Though aware of the work of Charters and Andrews, Brown (1967) insisted that description questionnaires have a place in the research arsenal, "more because of than in spite of the susceptibility of these descriptive statements to projective distortion." Brown proposed that leadership be regarded as a transactional phenomenon, determined *both* by the leader's and the followers' behavior—a state of the *group*. As such, leadership might with validity be measured by description questionnaires. Apart from the confusion that arises when terms like *leadership* and *administration* are used and defined in many ways (a matter considered in more detail below), Brown's point was cogent. Teacher perceptions are a vital subject of investigation in their own right. But as Brown himself emphasized, these perceptions cannot be assumed to depict administrator behavior accurately. Furthermore, when LBDQ dimensions are compared with teacher responses to other scales (on morale, for instance), spurious dependencies are to be expected. At present, unfortunately, it is virtually standard practice to accept teacher reports of the official leader's actions as veridical and to correlate two or more measures that are sensitive to follower affect (see, for example, Amidon and Blumberg, 1966; Anderson and Brown, 1966; Blumberg and Amidon, 1965; Brown, 1967; Dreeben and Gross, 1965; and

Gross and Herriott, 1965, as critiqued in Erickson, 1965). Charters' recommendation for design was overdue: scholars who wish to assess the impact of the leader on the follower must probe the leader's behavior through variables methodologically independent of measures of follower reaction.

In one laudable departure from the mode, Borg and Silvester (1964) devised a role-playing situational test to permit direct observation of the performance of school principals (see Antley, 1966; Hemphill, Griffiths, and Frederiksen, 1962). The reliability of the ratings was limited, but one suspects it could be improved through refinement of techniques (e.g., use of videotapes) and more rigorous training of scorers. Similarly, Bridges (1964) utilized simulations, unfortunately not described in his published report, in assessing the validity of teacher perceptions concerning participative decision making.

Criteria of Effectiveness

Two recent studies have provided analyses of the criterion variable problem, probably the most crucial, yet most neglected, issue facing researchers in this area. Morphet and Schutz (1966) enlarged in one particular on Halpin's (1957) classic dictum, providing perhaps the most satisfying discussion to date on the virtues of a multidimensional approach to effectiveness criteria. A complete statement, they insisted, must cover the following variables.

Administrator *A* [described in terms of individual traits] is rated *E* [poor, fair, good, excellent, etc.] relative to the best possible performance on criterion *C* [getting school bonds passed, supervising a building program, facilitating the development of creativity among students, etc.] by person (or group) *P* [administrative staff, teachers, board members, parents, etc.] in situation *S* [type of school or school district, etc.].

One appealing advantage of multiple effectiveness criteria is that they are separable from mere statements of preference. Instead of the question, "What type of administrator is best?" (as if there were any single "best" administrator type), the query may be posed, "When a given type of administrator is placed in a given situation, on what dimensions is he likely to demonstrate what strengths and weaknesses, as judged by a given set of raters or data analyses?"

Morphet and Schutz seem more confident than Halpin, further, concerning the value of *intermediate* criteria (ratings, etc.) as opposed to *ultimate* criteria (evidence concerning progress toward primary organizational goals as expressed in pupil achievement). The researchers argue that the relationship between administrator performance and organizational output is somewhat indirect, since these outcomes also depend upon the efforts of

many other people. Furthermore, school boards and selection committees often refer to intermediate criteria when specifying the superintendents and principals they seek. An important function of research, then, is to provide reliable data to help identify the desired administrators and to indicate at times that the criteria utilized are inconsistent.

Brown (1967) goes much further than Morphet and Schutz in emphasizing the difficulties involved in linking the administrator's actions to outcomes in pupil behavior. To attempt this, he says, is to indulge in the "cognitive fallacy." The function of leadership is to "facilitate the process of the organization, not its product." Consequently, when a school is using methods of instruction that are bad, good leadership will be associated with negative outcomes.

To adopt this stance, however, one must define leadership as relating almost totally to group maintenance and to group achievement only indirectly if at all. One must view the leader as having no responsibility to ensure that the processes he facilitates in the schools are beneficial rather than harmful, no mandate to analyze the total system and where it is going as well as to maintain its internal equilibrium, no duty to compensate for organizational shortcomings wherever they are found by serving as "com-pleter" (to use the language of Morphet and Schutz). If these functions are arbitrarily defined as "not leadership," they nevertheless fall within the purview of the officially designated leader, and information must be obtained concerning the circumstances under which they are performed. Knowledge concerning the operation of educational enterprises will be seriously deficient until administrator behavior and pupil learning are empirically connected, research difficulties notwithstanding. In the meantime, for all we know, we may provide the schools with technicians who keep the machinery well tuned but steer the ship off course.

Redefinitions of Leadership

As semanticists have observed to the point of tedium, the meanings of words are always rather arbitrarily derived—through accidents of usage, for instance. Brown (1967) cannot be forbidden to redefine *leadership*, by implication, as having to do with group maintenance almost exclusively and with goal achievement only indirectly. It is legal for Lipham (1964) to voice practically an opposite position—that in his lexicon *leadership* is not at all a matter of group maintenance, but only of "the initiation of a new structure or procedure for accomplishing an organization's goals and objectives or for changing an organization's goals and objectives." Halpin (1957) and many others are entitled to use the same word, in time-honored fashion, to refer to the stewardship of *both* group maintenance and group achievement. There is nothing to stop tomorrow's Turks from distinguishing many overlooked subdivisions of group maintenance and group achieve-

ment or from using the noun *leadership* to refer only to one or more of these concepts. In addition, some may define *leadership* in terms of what the administrator actually does—others, like Brown, in terms of what the administrator is perceived to do.

But in the process, communication may be complicated unnecessarily. Some writers, assuming that the meanings of words are divinely ordained and constant, may proceed energetically to synthesize findings on dissimilar phenomena, since all are called *leadership*. Confused students may argue the nonsense question, "Which of these functions is really leadership?" More sophisticated scholars, realizing there is little agreement concerning the connotations of key terms, may compose ear-bending neologisms (*politicization* and the like) or may avoid the necessity of shouting across verbal chasms by congregating in isolated subareas. It is of course vital to develop finer distinctions in the field of educational administration. The most conclusive studies in recent years have generally added variables and qualifications to the one-idea hypotheses used previously. It is important for some research purposes to distinguish group maintenance from group achievement, and many sharply explicated concepts must yet be honed in the interests of progress. It seems timely, however, to urge an indefinite moratorium on disputes concerning which new piece of conceptual luggage is best dignified by the famous blue tag marked *leadership* (formerly tied to a whole series of other semantic suitcases, often several at a time) or the venerable red label reading *administration* (attached and detached so repeatedly that it dangles in linguistic shreds). It should be sufficient to call *group maintenance* by that name, *goal achievement* by that name, and to invent reasonably descriptive terms with no more than eight syllables each to identify the concepts that will emerge in the future.

Correlates of Upward Mobility

In findings that contradicted a pervasive theme in the literature, Powers (1966) showed organization-oriented behavior *not* to be uniquely characteristic of upward-mobile personnel among the assistant principals in his single-city sample. The mobiles (subjects who desired advancement and were slated for it) and nonmobiles (subjects who did not desire advancement and were not slated for it) both attributed their success more to getting along with co-workers and subordinates than to getting along with superiors, while the immobiles (those whose desire for advancement had been thwarted) manifested the strongest tendency toward rigid conformity to rules. But since city school systems may differ greatly in this regard (see Griffiths, Goldman, and McFarland, 1965), Powers' work needs to be replicated elsewhere. White's (1954) is another interesting inquiry into differences among types of personnel in educational organizations, and some of its methods may be applicable in the further research required.

Situational Determinants

In a *post facto* analysis of his data, Bridges (1965) saw tentative indications that elementary school principals behaved more and more alike as they gained experience. As another possible outcome of socialization to the role, the principals in Brown's (1966a, b) sample exhibited two orientations toward the evaluation of teachers that differed from the outlook evinced by prospective administrators. Such findings evidence elements of commonality across situations.

In their Alberta LBDQ inquiry, Anderson and Brown (1966), finding no associations between leadership styles and situational factors, concluded that "any type or frequency of leader behavior can be utilized in any situation." This statement is questionable on three counts: (a) description questionnaires "are not [or probably not] valid revelations of 'leader behavior,'" as Brown (1967) elsewhere declared; (b) the study involved only one method of conceptualizing leadership styles; and (c) several school types (as found in Chicago and New York, for instance) are not to be expected in Alberta. Furthermore, Morin's (1965) evidence suggested that even in Alberta different demands were placed on the principal in elementary than in secondary and in rural than in urban schools.

The conclusions of Nicholas, Virjo, and Wattenberg (1965), based on a sample of *one* for each of the four categories compared, can be viewed as no more than suggestive, but the differences in administrative behavior that these researchers found when comparing lower class to middle class schools and open- to closed-climate schools were pronounced. The study deserves re-execution with an adequate design. Wayson's (1966) inquiry, also inconclusive because important variables were uncontrolled, raised the possibility that the principal's innovative efforts would be resisted in "slum schools" to a greater extent than in more prosperous environs. According to Halpin (1966), unpublished OCDQ studies have demonstrated a tendency for inner-city schools to exhibit closed climates disproportionately.

In Bridges' (1964) single-city study in the Midwest, teachers in larger schools (20-32 teachers) reported less participation in decision making than teachers in smaller schools (12-19). Antley's (1966) not-too-rigorous inquiry depicted an apparently opposite relationship in Mississippi, where co-operative decision making was more common in larger than in smaller schools. But the geographic settings differed, the measures of participation were dissimilar, and, unlike Bridges, Antley included an unspecified proportion of secondary principals and superintendents in her sample. Andrews (1965) found that closed climates (OCDQ) were more common in the larger Alberta schools. Dodd (1965) discovered a tendency for principals of small schools to experience less role conflict than principals of large schools. Further work is clearly needed to probe the implications of this apparently important situational factor of school size, while isolating the effects of such related variables as organizational complexity.

Staff acceptance of the administrator's leadership may be a significant situational mediator of effectiveness, according to a provocative investigation by McNamara and Enns (1966). Essentially, their research essayed Fiedler's Contingency Model of Leadership Effectiveness in the school setting. One suspects that little progress will be made in research on administrator behavior until hypotheses of this level of complexity, similarly based on previous research, become more common. In the study, principals' scores on directiveness (versus permissiveness) failed to correlate with rated school effectiveness until schools with good principal-teacher relations and schools with poor principal-teacher relations were analyzed separately. In schools where principals were well supported by teachers, a directive style was associated with rated school effectiveness; in schools where principals lack staff support, a permissive style was associated with rated effectiveness, as predicted in the model. (Is acceptance of the principal's leadership associated, in turn, with professionalism or need for autonomy among teachers, as Bridges' (1964) evidence suggested?)

The most impressive investigation during this period of the effects of situational variables was made by Morphet and Schutz (1966). First of all, the evidence tended to vindicate the multidimensional criteria of effectiveness they had advocated; psychological characteristics of the administrators in the study predicted rated effectiveness with a power ranging around 0.45 in multiple-regression analyses. Morphet and Schutz then hypothesized that the multiple r 's would be considerably higher if correlations were computed separately for each type of school district. (If a given variable is positively associated with a rating of effectiveness in one kind of district but unassociated or negatively associated with the same rating in another kind of district, the relationships will be obscured until the district types are differentiated.) The hypothesis was supported strongly. Rather uniformly, predictions of effectiveness ratings were improved by a margin of approximately 0.34 when school district type was taken into account.

The Superteacher Model

Much of the hortatory literature has portrayed the successful school principal as a kind of "superteacher," one who draws upon an extensive store of pedagogical know-how as he helps teachers improve their performance. Not surprisingly, most Alberta principals in Morin's (1965) study saw a thorough grasp of the bases and techniques of instruction as the central prerequisite of the principalship. If this general viewpoint is valid, the most effective principals should be those who, through extensive teaching experience, have had ample opportunity to master tutorial techniques.

But the available evidence contradicts such a contention. Gross and Herriott (1965) reported that neither type nor length of teaching experience distinguished principals rated high on Executive Professional Leadership (probably best interpreted as a measure of the principal's acceptance

by teachers as official leader). In Antley's (1966) Mississippi study, a lengthy teaching background, at least at the elementary level, showed some apparent tendency, though not statistically significant, to disqualify the individual for the administrative role. Years of elementary teaching were negatively associated with the disposition to entertain a broad range of decision alternatives and to consider the wider implications of the choices to be made. In the elementary, junior high, and senior high schools sampled by Dreeben and Gross (1965), the more extensive the principal's experience as a teacher, the less he apparently lived up to his own belief that he should support innovation, though the tendency was not statistically significant at the senior high level. Morphet and Schutz's (1966) findings were even more startling. In terms of several intermediate criteria of success, three groups of raters (teachers, administrative staff, and board members), and several school district types, an administrator with many years of teaching experience came through as "outstandingly unsuccessful as both a principal and a superintendent." Length of teaching experience was "more negatively related to administrative effectiveness than any other predictor variable in the battery." Parenthetically it may be observed that such research findings do not seem to have filtered down to the writers of state statutes and administrative regulations concerning the certification of school administrators.

Trask (1964) found evidence of "contradictory, if not conflicting, professional and bureaucratic requirements" in the "Cheshire City" schools. Of the 44 principals in her inquiry, 36 perceived the superintendent to be very positively oriented toward the supervision of teachers. The principals were required to submit an annual evaluation of new or beginning teachers for the first three years that the teachers were in the system, and a triannual evaluation of experienced teachers, basing each evaluation on 20 classroom visits. About 60 percent of the principals' time was to be spent in supervision. But only 4 principals out of 45 perceived teachers to be positively oriented toward supervision, and interference in a teacher's classroom was seen as justified only in extreme cases. In an apparent effort to manage the conflict between the demands of the superintendent and the perceived attitudes of teachers, the principals emphasized advice and suggestions rather than orders, varied supervisory practices in keeping with their own qualifications and the qualifications of their teachers, and redefined supervision to include many kinds of behavior not generally so classified. In Corwin's (1965) Michigan-Ohio sample, 24 percent of all conflicts reported by teachers concerned classroom control, curriculum management, and authority in the school; of 159 incidents of open conflict, about 25 percent were contentions between teachers and administrators over the exercise of authority. The extent to which instructional autonomy was specifically at question was not clear.

Following Charters (1964a) and drawing tentative support from an unpublished study that they discussed in part, Briner and Iannaccone (1966) argued that duplication (rather than division) of labor character-

ized the work flow in schools and other organizations in which the product is produced through a series of complex and distinctly different operations performed chiefly by an individual. The single worker (in this case the teacher) was given primary responsibility for the product. Briner and Iannaccone hypothesized that, in organizations of this type, "the introduction of specialists will take the form of a new division of labor which creates a secondary work flow acting on a worker in the primary work flow and not directly on the product." But since placing the specialist in a line position superordinate to the teacher either would force the specialist to function as a generalist or would reduce the scope of the teacher's performance to that which the specialist was qualified to supervise, Briner and Iannaccone hypothesized that the specialist would usually occupy a staff office. Then, they argued, partly because of the potential for conflict between line and staff, "reciprocal arrangements of unique spheres of interest" would typically evolve. In schools, Briner and Iannaccone predicted, the line officer (the principal) would concentrate on general organizational issues, exercising (the special subject supervisor) his metier would be the instructional realm, where he would wield the authority of "expert knowledge, research, and science, or uncommon wisdom." Such a division of spheres would of course militate against the classic image of the principal as superteacher. Rather pertinent in this connection was Brown's (1966a, b) finding that Alberta principals generally, and system-oriented principals particularly, tended to be preoccupied with teacher behaviors affecting the school as an organization. Matters of discipline, for instance, seemed to influence judgments of teacher effectiveness very strongly, while opinions as to the teacher's knowledge of content and method were reflected comparatively little in the principal's evaluations.

At first glance the superteacher model seems strongly supported by two reports of the National Principalship Study (Dreeben and Gross, 1965; Gross and Herriott, 1965). In their national sample of 501 elementary, junior high, and senior high school principals, Dreeben and Gross reported that the overwhelming majority felt rightfully obliged to supervise teachers closely, and few teachers resisted efforts to do so. Principals supervised the more competent teachers as extensively as they did the less competent teachers. When supervision was closer, teacher morale was higher, teachers worked harder to help pupils, pupil achievement was improved, and at the junior and senior high school levels teachers were more loyal to the principal. But these indications are so incongruent with the findings of other studies during this period (Antley, 1966; Gross and Herriott, 1965; Morphet and Schutz, 1966; and Dreeben and Gross themselves—all on the correlates of teaching experience; Trask, 1964, on the attitudes and behaviors of principals concerning supervision; and Corwin, 1965, on matters concerning which teacher-administrator conflict apparently arose) and earlier (for example, see *Administrator's Notebook*, 1955; Cheale and Andrews, 1958:

and Getzels and Guba, 1955) that one is cautioned to examine the research design for specious associations. The likelihood of halo in several findings is very strong, since the same teachers who reported the principal's behavior, as they perceived it, estimated teacher morale, teacher effort, teacher loyalty to the principal, and pupil achievement. Secondly, Dreeben and Gross's measure of "closeness of supervision" is extremely equivocal: one is hard put to determine exactly what it is measuring. According to the items in the scale, principals who supervise teachers closely do the following:

40. Require that teachers discuss their major classroom problems with the principal.
37. Ask teachers to report all major conferences with parents to the principal.
46. Require teachers to keep the principal informed of "problem" children in their classrooms.
39. Closely direct the work of teachers who are likely to experience difficulty.
32. Require that teachers' classroom behavior conform to the principal's standards.
36. Check to see that teachers prepare written lesson plans.
42. Know what is taking place in most classrooms during most of the day.

Without analyzing the items in detail, it should be clear that a principal could conform to all of these requirements and still permit teachers virtually unhampered leeway in instructional particulars as long as a modicum of discipline was maintained. All items except one (item 32) could be interpreted as dealing basically with classroom control—as ensuring that the principal would give teachers the help they needed to keep pupils and complaining parents in check and would forcefully intervene when a teacher was unable to maintain authority. There has been much research to indicate that teachers favor strong interest and support from the principal in this regard. Typically, challenges to the teacher's autonomy from pupils and parents have been a major source of anxiety, and the entire school is often felt to be threatened by any serious breakdown in discipline. As any teacher or principal knows, the mere requirement of written lesson plans (item 36) is virtually meaningless unless one specifies how detailed the plans shall be, what they must contain, and so on. In short, there is not a single item in the scale that speaks directly to the issue of teacher acceptance of the principal as instructional expert. Later, one of several possible interpretations of the scale will be examined briefly.

In the inquiry by Gross and Herriott (1965), the scores of elementary principals on Executive Professional Leadership (EPL) were found to be related to staff morale, teacher performance, and pupil achievement. The researchers defined EPL verbally as representing the *attempts* of the principal to influence teacher performance, but the items in the scale referred

only to attempts viewed by teachers as successful. In every instance, teachers were asked not merely to report what the principal did but to judge the motives or consequences of his actions. Examined closely, EPL as operationalized in the study seems best regarded not as a measure of the principal's supervisory effort but as an estimate of his acceptance by teachers as the formally designated leader. As in the work of Dreeben and Gross (1965), there was a puzzling aversion to using personnel records and achievement test results, for teachers were asked to *estimate* peer performance and pupil achievement. Though the split-sample technique was adopted in some instances to control partially for halo, the technique was omitted, without explanation, in other instances. In neither of these two reports of the National Principalship Study, then, was there the evidence for the superteacher image that the authors' conclusions suggested.

One would hope for carefully designed inquiries to explore the circumstances under which school principals may effectively function as their teachers' mentors with reference to subject matter content and pedagogical method. Receptivity to this exercise of expertise must be isolated, as it has not been in past investigations, from the teacher's need to have an adult visit the classroom from time to time to show an interest, provide approval, or establish a disciplinary tone. The outward trappings of supervision must be distinguished from actual exercise of control. The concept of zones of influence, impressively developed by Bridges (1967) in one regard, calls for extensive attention.

An intriguing possibility is that several ostensible measures of supervision reflect, as a major component or correlate, teacher perceptions of an energetic, industrious principal. Several relevant items and associations in Dreeben and Gross (1965) and Gross and Herriott (1965) may be so interpreted. A similar hint may be drawn from the finding of Anderson and Brown (1966) that "the greater the perceived *frequency* of principal leader behavior, the higher is the staff rating" (*italics added*). In Andrews' (1965) validation study, the correlation between rated principal effectiveness and Thrust was high enough to approximate the reliability coefficient for either scale. In Ziolkowski's (1965) investigation, Saskatchewan teachers in schools classified as "superior" were more likely than those in schools classified as "inferior" to rate their principals as "very hard workers." Such indications are reminiscent of Kimbrough's (1959) indication that administrators rated as effective were a generally overworked lot, taking little or no time for recreation, paying little attention to their physical well-being, and often suffering rather chronic health deficiencies. There is reason to suspect, then, that sheer expenditure of energy has been confounded with a number of variables in studies of administrator effectiveness, particularly in the schools. Perhaps teachers, isolated from many important aspects of the principal's performance, are forced to judge him on such overt indices as the appearance of entering wholeheartedly into his work.

Effects of Training Programs

There is mounting evidence to suggest that most university programs for the preparation of educational administrators enjoy limited positive outcomes and may even produce a trained incapacity for the job. In an important earlier inquiry (Hemphill, Griffiths, and Frederiksen, 1962), it will be remembered, years of formal preparation were uncorrelated with ratings of effectiveness by the principals' superiors or teachers or by scorers in the study itself. There was essentially no relationship between amount of academic preparation and performance on various administrative tasks that were investigated. Gross and Herriott (1965) showed number of graduate courses in educational administration to be negatively related to Executive Professional Leadership. In Antley's (1966) examination of decision-making approaches, courses in administration and supervision lacked any demonstrable impact whatsoever. Knowledge of the content of these courses was associated with several decision-making traits, but Antley failed to deal with the fact that those who master such materials best are generally more intelligent to begin with. In Morphet and Schutz's (1966) investigation, the same type of technical knowledge showed no linkage with rated effectiveness in other areas. Attempts should now be made to validate these tendencies systematically and to determine what characteristics of current programs are responsible for the apparently negative or inconsequential outcomes. Are superior results associated with internships and residencies? With an interdisciplinary focus? With sensitivity training? With use of case studies and simulations?

Other Methodological Developments

In what was probably the best of the four reports of the National Principalship Study discussed here, Gross and Trask (1964) provided much-needed knowledge concerning the variables that must be controlled when male and female school principals are compared. Men and women principals were found to differ on such background variables as age, marital status, parents' social status, rural versus urban origins, self-reported academic achievement, type of institution attended at undergraduate and graduate levels, number of courses taken in administration, teaching experience, and first-choice preference for teaching. Surprisingly, in later reports of the National Principalship Study (notably Dodd, 1965), the right hand ignored what the left had done, for most of the variables Gross and Trask had shown to be critical in sex comparisons were left unconsidered and uncontrolled (see Trusty and Sergiovanni, 1966).

Two national status studies of secondary school principals (Hemphill, Richards, and Peterson, 1965; Rock and Hemphill, 1966) tabulated information that will aid in the planning of research and in determining the representativeness of given samples.

In the Discriminant Perception Repertory Test, Brown (1966a, b) made available an instrument that may deserve wider use in studies of the perceptual correlates of decisions on teaching effectiveness, for his technique elicits the subjects' criteria projectively rather than depending on introspection. Significantly, his comparisons suggested that school principals did not verbalize accurately the bases of their assessments.

Summary

It would appear that research on the school administrator represents an immature field, lacking well established canons of inquiry of any notable rigor and suffering still from efforts that reflect little awareness of previous developments. A strong cross fire of collegial criticism might be salutary at this point.

There is room for optimism, however. A growing coterie of capable scholars have been giving sustained attention to the relevant issues. At least four individuals executed earlier studies that stand as landmarks (Griffiths, Gross, Hemphill, and especially Halpin). A few other first-rank thinkers have contributed seminal concepts in recent years (Campbell and Getzels, for instance).

As any capable methodologist might predict, the most useful work seems to be coming from researcher-theorists who are eschewing the simplistic models that are still too common, probing more complex combinations of related variables, questioning commonly accepted assumptions and interpretations, developing refined instruments and methodologies to overcome the weaknesses of existing approaches, and adapting to the educational setting formulations that have proven illuminating elsewhere.

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CHAPTER V

Teacher Characteristics and Careers

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Projecting to the privileged vantage point of the year 2065, Cartwright (1965) expressed the dilemma of those who tried to improve teaching in 1965: "The authorities on teacher education, having almost no knowledge resulting from research, made their decisions in the manner of primitive people, basing them 'on varying combinations of knowledge and superstition, wisdom and foolishness, tolerance and prejudice, desire to improve and tribal tradition, perspicacity and narrowness of vision'" (p. 296).

Was the situation really this bad? What have those who would increase our knowledge through research been doing? Educational research as it is and as it should be has been discussed in a number of books and articles.

Teacher Effectiveness

In spite of the elusiveness of the qualities of the effective teacher, educators have continued to try to isolate, describe, predict, and train him. The concept of *the* good teacher has been questioned by those who have written critically about teacher research, but it has been very much in use in many of the recent studies. Some of those engaged in research have asked by what frame of reference and by what expectations and values a teacher is being judged effective. A few researchers have begun to ask under what conditions a particular type of teacher is effective or ineffective. And implicit in one or two studies is the question of which teachers are effective for which students.

Some have felt that the whole approach to the problem is invalid. Combs (Combs and Mitzel, 1964) stated flatly that objective measurement of the good teacher is impossible and that it is the use a teacher makes of his unique personhood (i.e., the meanings behind behavior) rather than any set of personality traits all good teachers possess in common which results in excellence in teaching. Mitzel, in rebuttal, argued that it is not what the teacher thinks and feels but what he does that actually affects the pupil.

Ratings

Most of the studies used ratings or combinations of ratings to identify effective and ineffective teachers. The unreliability of such ratings has been well established (Biddle, 1964). Hawkins and Stoops (1966), however, found high agreement between teacher ratings made by five different groups

of personnel and parents within the same school. Principals' written evaluation reports of teachers were most deviant. Thus, within a common cultural setting there may be considerable agreement regarding qualities desired in teachers.

B. B. Brown (1966) has been developing an interesting and hopeful approach to the problem of frame of reference by which teacher effectiveness is judged. Postulating that value assumptions underlie the very concept of relative effectiveness of teachers, he has aimed at developing instruments for measuring congruence between a teacher's beliefs and his observed behaviors in the classroom. In order to provide a common referent that will permit comparable measurements of values and practices, Brown has developed two Q-sorts based on Dewey's philosophy of education. He is currently engaged in large-scale testing and refining of these instruments.

Rating of teachers is not a problem confined to research, however; it is of daily practical importance to thousands of school administrators and to hundreds of supervisors of practice teachers. In a study that recognizes the difference between voiced educational values and actual bases of discrimination, A. F. Brown (1966) found that principals ranged from those who judged teachers in terms of absolutes to those who scarcely perceived individual differences even among teachers they had classified in terms of effectiveness. The "system-centered" principal held rather different bases of judgment of teachers than the "individual-centered" principal, and both differed rather radically from teachers' bases of judgment. For the total sample of principals, the teacher's ability to discipline was of primary importance, "stimulatingness" second, and positive or negative attitude toward job third.

Additional References: Anastasiow (1966); Brown (1966); Start (1966).

Attitude Toward Teaching

The *Minnesota Teacher Attitude Inventory (MTAI)* continued to be used in a great many studies to measure "good" attitudes toward teaching and toward children. A factor-analytic study of this instrument has been carried out by Horn and Morrison (1965), who found not one unitary democratic factor, but five covarying patterns of items: (a) "modern" versus "traditional" attitudes toward classroom control, (b) optimism-favorable versus pessimism-unfavorable attitude toward students, (c) permissive lack of concern versus punitive concern about certain behavior, (d) rejection of pupils stemming from bewilderment rather than dislike or punitiveness, and (e) desire to maintain control of children versus inclination to let them run free.

The *MTAI* was used by Burkard (1965) in a study of 300 nuns and 10,970 pupils in Midwestern parochial schools. A comparison of pupil rankings of teachers (best-liked to least-liked) and teachers' *MTAI* scores elicited no correlations except a few single items at the seventh- and eighth-grade level. The authors concluded that the lack of relationship and

the generally low *MTAI* scores of teachers suggest a basic difference between the educational philosophy of the *MTAI* and that of the parochial school system in the study. Irish student teachers (Tarpey, 1965) also scored below American norms on this instrument, leading the authors to a similar conclusion.

What do students mean when they talk about good and bad teachers? Wright and Sherman (1965) used a teacher rating scale based on Redl's typology of the group leader. Upper elementary pupils agreed on items describing a teacher's explicit instructional and disciplinary role. They systematically disagreed on items describing sympathy between teacher and pupil and on those denoting the teacher's emotional identification with his pupils. These seemed to involve individual relationships and each child's affective perception of his teacher. The statistical methods used in the analysis will be of interest to researchers who wish to measure differences as well as central tendency.

Hall (1965) asked 1,217 college students to name and describe the best and worst teachers they had ever had. The teachers most often remembered as best had both an academic and a personal influence on the student. One fifth of the students gave that teacher credit for decisively influencing the student's choice of career. An unexpected finding was that 103 teachers were named as the best teacher ever experienced by one student and the worst teacher by another. The characteristic of the good teacher mentioned most frequently in Patton and DeSena's (1966) sample of high school students was sense of humor, followed by mastery of subject matter and ability to communicate clearly.

Predicting Teaching Success

Several efforts to find reliable predictors of teaching success in precollege or college data met with little success. Koskeniemi, Heikkinen, and Alikoski (1965) isolated negative attitudes toward children, weakness in logical planning and thought, and previous unsuccessful careers as characteristic of unsuccessful teachers, whereas successful teachers exhibited no such common set of traits. However, they did not discover a means of predicting the unsuccessful candidate. Veldman and Kelly's (1965) study is of some interest for the combination of methods used in identifying "effective" student teachers for the sample. Their effective teachers were more friendly, exercised strict control, had more positive attitudes, provided a meaningfully structured classroom atmosphere, and displayed an "unusual willingness to accept traditional authority patterns" (p. 107). The ineffective teacher lacked self-assurance and social skills and was uncomfortable with the school authority structure.

Zimiles and others (1964) found that unstructured instruments which allowed the respondent to express himself in his own way, such as the *Sentence Completion Test*, were better predictors of teacher performance than the structured *MTAI*. Morman and others (1965) have been develop-

ing a battery of nonability selection devices (TAV Selection System) based on Horney's personality theory.

Rigidity-Flexibility

Teacher educators, frustrated in their efforts to bring about significant change in the teaching behavior of many students, have begun to explore the relationship between a teacher's cognitive flexibility and open-mindedness and his teaching effectiveness. Sprinthall, Whiteley, and Mosher (1966) found a substantial and significant relationship ($r=0.53$) between rankings of students' flexibility-rigidity predicted from personality tests and subsequent ratings of observed teaching behavior. The authors concluded that they effectively measured interns' cognitive flexibility and that flexibility is related to success in teaching.

Joyce, Lamb, and Sibol (1966) also used open-ended personality tests to identify "conceptually abstract" and "conceptually concrete" student teachers. Subjects were given a case study test in which information about a child accumulated in three sections. Each section was followed by diagnostic and remedial alternatives. The "concrete" subjects made up their minds after the first section, with little change thereafter. The "abstract" subjects reacted to increased information by taking more definite positions, especially with regard to remedial statements. Joyce, Lamb, and Sibol concluded that the more open-minded teachers were more aware of alternatives, more able to receive cues from and react to children.

Both of these studies are good examples of the kind of meaningfully limited hypotheses and methods which should in time build up a body of useful information about teachers. Gulutsan (1965) reported an interesting and rare use of the experimental method with experienced teachers. In the experimental course the degree of structure teachers preferred in their choice of methods appeared to be related to authoritarianism scores.

Special Teachers

Three studies of special class teachers (Condell and Tonn, 1965; McBride, Hammill, and Gilmore, 1965; and Meisgeier, 1965) depended on well-known personality tests. In general, successful work with exceptional children appeared to require a healthy, outgoing personality plus an extra bit of sympathy, physical energy, and common sense. Teachers who taught special classes from the beginning were more successful than those who gained experience in regular classes first, suggesting that it may be difficult to readjust expectations formed in working with normal children.

Personality Characteristics of Teachers

The most recent studies of the personality characteristics of teachers largely confirm earlier findings. Gillis (1964) administered the *Stern Activities Index* to 279 male and 422 female teacher trainees. The results

were compared to those obtained from Stern's normative college population. Teacher trainees differed significantly from the norm group on 18 of the 30 "needs" scales. Although trainees had a greater need for cognitive organization, they had less interest in intellectual analysis, discussion, objectivity, problem solving, and abstraction. Teachers' dependency needs were greater on eight of the nine scales. They expressed more need for close, mutually supportive relationships, deference, denial of hostility, and for order and attention to detail. The differences between the teacher and the norm groups remained when the sample was adjusted for sex ratio. In the dimension of impulse needs, education students expressed weaker needs for aggression and assertion, but a stronger need for emotional expression combined with a tendency to reject impulsive behavior. The men emerged with stronger intellectual needs, the women with greater dependency needs, conforming to general role expectations of men and women in our society. It is disappointing that these data were not analyzed by teaching level.

Kenney and White (1966) administered the *Sixteen Personality Factor Questionnaire* to a random sample of 50 male and 50 female elementary teachers from a school system of 1,800 teachers. Male teachers were more stable; had greater ego strength, vitality, and realism; and were more socially responsive. The women were more emotional, prone to neurotic fatigue, introspective, and restricted.

An effort to relate biographical information to *MTAI* scores resulted in little correlation between the two (Lantz, 1965). There were very slight indications that high scorers came from more permissive homes, while low scorers had more dominant mothers. Stone (1965) found considerable stability in Ryans' traits, "understanding-friendly" and "responsible-businesslike," in education students over a period of six years when raters' bias was systematically corrected. A survey of teachers' leisure activities impressed London and Larsen (1964) with the rather narrow range and passivity of the choices. Few teachers reported activities requiring commitment, skill, or strong interest. One wonders whether this is especially typical of teachers or represents a larger societal trend.

These studies and others listed below generally confirmed or added to earlier findings of differences in characteristics of personnel by teaching level and subject taught, and between teachers, principals, and counselors. Elementary teachers are more person-oriented; high school teachers are more subject-oriented. The male teacher is "stronger," the female teacher more dependent. Teachers are characterized as relatively unintellectual, unaggressive, and conforming.

Additional References: Aden and Crothwait (1966); Kemp (1964); Kenyon (1965); Swift and Rootman (1964).

Teacher Images

Smith (1965) did an interesting series of studies on teacher images. Nonteachers felt teachers should be more active, aggressive, creative, and

should exercise more leadership. High school teachers, in contrast, were quite satisfied with teachers as they saw them and placed higher value on appearance, organization, and ability to discipline. Mature, experienced teachers expressed a high degree of congruence between their "real" and "ideal" selves. Student teachers scored highest of 10 occupational groups on discrepancy between the self they were and the self they wished to become.

In a study involving 470 teachers and 237 parents, teachers saw parents as comparatively indifferent to moral training and as emphasizing academic instruction and social training (Musgrove and Taylor, 1965). Parents, however, saw the teachers' work primarily in intellectual and moral terms virtually identical to the teachers' goals. Teachers generally took an unflattering view of parents.

Motives for Teaching

An ambitious study of childhood identifications and their relationship to motives for choosing teaching as a career was undertaken by Wright and Tuska (1966). Some 5,108 middle class college and university students were asked for their recollections of childhood relationships with father, mother, and teacher. The sample consisted of 2,258 future elementary teachers, 1,856 future high school teachers, and 994 students who did not plan to teach. Questions about 20 childhood relationships were combined through factor analysis into five types of relationship: sympathy, antipathy, interference, admiration, and influence. An interesting aspect of this study is its grounding in a rather carefully spelled out developmental theory. All male trainees and the women high school teacher trainees much more often remembered teacher as admired and influential, while nonteachers and women elementary trainees more often saw mother as influential. Men teacher trainees reported unsatisfactory relationships with their fathers more often than male nonteachers. These and other results suggested to the authors that the future high school women teachers were more often disappointed in both their parents and turned to their teachers as models for successful identification. Future women elementary teachers seemed to identify with their mothers and perhaps hoped to find mothering satisfactions in their teaching. Male teacher trainees, less often able to identify positively with their fathers, turned to teachers for their masculine models. Elementary teaching for men may be a way of fulfilling within a masculine role some of the satisfactions they found in childhood in their good relationships with their mothers.

Webster (1964) found a high correlation for both men and women teacher trainees between the methods of control they used with pupils and the methods they recalled their fathers' having used with them when they were children. Women trainees were perceived as behaving toward pupils as they remembered their mothers' behaving toward them in the areas of inclusion, affection, and control.

Additional References: Mitchell (1965); Mori (1965).

Beginning Teachers

Hermanowicz (1965) summarized the findings of 13 separate research projects studying 312 teachers in their first three years of teaching in different parts of the country. Most of the teachers criticized their professional education courses: all valued their practice teaching experience and would have liked more time and help given it. Those (one half of the sample) whose first teaching job was in a different type of school than that in which they trained found the adjustment difficult. The chief source of teaching help was from veteran teachers. Most felt teacher-orientation and in-service programs were highly desirable but in practice were either poor or nonexistent.

Turner (1961a, b; 1965a) has done some careful thinking about the specialized nature of teaching and the process of learning to teach during training and beginning teaching experience. Analyzing the teacher's job as a set of specialized work tasks performed and problems solved, he was concerned with both the personal interaction within the classroom and the school and community expectations and sanctions which strongly affect the teacher's development. Teaching tasks in reading and arithmetic have been rigorously developed as measures of teacher task performance. In a series of studies, public college graduates consistently outperformed graduates of private colleges and universities on a set of teaching tasks in reading and arithmetic, and performance rose significantly after the first three years of teaching experience. There seemed to be considerable independence among skills in different subject areas.

In his most recent study, Turner (1965b) examined the influence of institutional factors on the development of the beginning teacher. More than 200 beginning teachers in 13 Indiana school systems were studied through their first two years of teaching. The teaching tasks were used to measure changes in teachers' ability to perform in two subject areas. Each teacher completed Ryans' Teacher Characteristics Schedule, and data were obtained about the school population and supervisory practices in the schools. School systems with predominantly working class pupils placed high value on discipline, organization, and task performance in the classroom. Difficulty with any one of these items, but especially with discipline, brought the beginning teacher substantial supervisory help. The person who had given effective help to a teacher still rated his performance below that of teachers who had not needed help. To outside supervisors, all beginning teachers in this system were about equally effective at the end of two years of experience. In the predominantly middle class school districts supervision was largely in the hands of principals. Evaluation of teachers was based on personal warmth and social skills. Problems with discipline and organization did not bring more supervisory help nor did they seem to be important factors in the principals' ratings of teachers. Teachers in the two districts exhibited the same characteristics, but any particular

teacher could have been rated very high in one district and very low in the other. Turner concluded that the fate of beginning teachers and the direction of their development may be closely linked to the type of school in which they have their teaching position.

An Edinburgh study (Butcher, 1965) of 300 serving teachers and 176 teachers in training concluded that students generally became more "progressive," "radical," and humanitarian in their attitudes as a result of education courses, but that these changes were largely reversed after full-time teaching experience. Experienced teachers expressed greater strictness in their attitudes toward moral and disciplinary questions.

Wright and Tuska (1965) found that young women entered teaching with high hope and suffered significant disillusionment with experience. Those who received their training in liberal arts colleges and universities suffered greater disillusionment than those trained in teachers colleges. A "demanding" teacher model appeared more adequate for the realities of teaching than an "undemanding" teacher model (Tuska and Wright, 1965). High school teachers faced their greatest challenge during training when mastery of subject matter was questioned by college teachers (Wright and Tuska, 1966). Women in the lower elementary grades suffered their greatest disillusionment during their first year of teaching when they felt the full emotional impact of responsibility for a class of young children.

Additional References: Evans (1964); Haberman (1965); Johnson (1965); Murray and Barrett (1965).

Teacher Perceptions of Children

In an experimental situation (Johnson, Feigenbaum, and Weiby, 1964) teachers attributed positive characteristics to high performing students and negative ones to those who did poorly. When a student improved, the teacher felt responsible; when the student did not improve, the student was blamed. Anastasiow (1964) found that teachers perceived their class's mean reading level to be at grade level, regardless of actual reading achievement. A third-grade teacher assigned third-grade reading texts to her median pupils, even though these children were actually reading at sixth-grade level.

Hart (1965) found that occupationally upward-mobile teachers were more dominative than nonmobile teachers toward lower class students. All teachers gave the same amount of attention to students from upper- and lower-occupational backgrounds, but the "uppers" were given more helpful contacts while the "lowers" were given more dominative contacts. High school teachers (Kornacker, 1966) from different ethnic groups placed different teaching emphases on academic excellence.

Gottlieb (1964) discovered significant differences between white and Negro teachers in attitudes toward children of both races from low-income

families. White teachers described their pupils as "talkative, lazy, fun loving, high strung, and rebellious." while Negro teachers viewed them as "fun loving, happy, cooperative, energetic, and ambitious." Negro teachers blamed the physical environment for their teaching problems: white teachers blamed the children and their parents.

Forty-two women teachers who had taught in the same inner-city school for five years or more and 20 teachers who were leaving were interviewed by Wayson (1966a, b), who reported that the white teachers who stayed in the school had reduced their academic expectations and increased their acceptance of non-middle class behavior. The leavers had often increased their efforts at discipline. Teachers who stayed valued the freedom from extraclass duties and pressures and got altruistic satisfaction from close relationships with children who needed them. Those who were leaving gained more satisfaction from pupil achievement and the principal's positive appraisal and felt they could find more receptive pupils in other schools.

Teacher Employment and Turnover

The wealth of statistical data accumulated on the teaching profession by the 1960 census has been summarized and presented in more popular form in several articles (NEA, 1964a, c). In addition, the NEA (1965b) presented the results of a 1964 survey characterizing the teacher population. Of the 2 million classroom teachers in the United States, two out of every three were women. Nearly 70 percent of the women taught in elementary school, while four fifths of the men taught in high school.

Hunter (1964) reported on a 1957 survey and follow-up study of beginning teachers made by the U.S. Office of Education. The chief reasons given by the 14 percent who left the teaching profession at the end of the first year of teaching were military service (men, 24 percent) and homemaking (women, 53 percent). Beginning teachers found their greatest satisfaction in the human relations connected with their work. Their greatest dissatisfaction was with salary rates. Those who returned to teaching a second year (86 percent) reported an increase in satisfaction in virtually every area of their work. Although 70 percent of the women expected to leave teaching for homemaking, 58 percent intended to return later. Men were more influenced by the intrinsic rewards of the job in making their career commitment. A study of St. Louis teachers by Charters (1965) gave very similar results.

Personal factors do, however, enter into the decision of many teachers to leave teaching. *MTAI* scores (Sorenson, Schaefer, and Nyman, 1966) indicated that the teachers who remained a second year had more favorable attitudes toward schools and children, showed greater sensitivity to psychological factors in behavior, saw the teacher role as tolerant and supportive, and endorsed the need for tight, unquestioned classroom disci-

pline. In a survey conducted by the NEA (TEPS, 1965) 1,035 educators ranked inadequate help for new teachers fourth and misassignment of teachers fifth among 12 problems limiting quality education. A total of 677 cases of misassignment was reported.

Griffiths, Goldman, and McFarland (1965) reported on a large study of teacher mobility in New York City. Four types of teachers were distinguished, the upward-mobile, the pupil-oriented (probably two thirds of the teachers), the intellectuals, and the benefits-oriented. Three fourths of the teachers and almost all supervisory personnel were local products. The authors discussed board examinations as a method of teacher selection and the formal and even more powerful informal placement procedures.

In an analysis of 20 school districts Faber (1965) found much higher qualifications among teachers in excellent districts. Kirkpatrick (1964) discovered some relationship between high school teachers' perception of promotional possibilities and satisfaction with their present teaching position. Contrary to expectation, Moeller (1961) and Moeller and Charters (1966) found that teachers felt a greater sense of power within the predictability of a highly bureaucratic school system, although perceptions were affected by personal variables as well.

Additional References: Corwin (1965); Soles (1964).

Administrator-Teacher Interaction

A large sample of administrators and teachers was surveyed on practices and attitudes toward teacher evaluation in the schools (NEA, 1961b, d: 1965a). Many more large schools than small schools had formal evaluation systems. Teachers new to the school system were evaluated much more often than continuing teachers, and elementary teachers were evaluated more frequently than secondary teachers. A variety of methods were used both in arriving at and in reporting evaluations. About four fifths of the school superintendents, three fourths of the principals, and only one half of the teachers expressed confidence in their school's evaluation system. Nearly two fifths of the elementary teachers and more than one half of the secondary teachers had doubtful or negative attitudes. It was concluded that evaluation could be a constructive activity for both teacher and principal, but that few principals had the time to do it adequately. Most of the teachers surveyed felt that they had received enough help from their principals, but more than a fifth did not. Experienced teachers were likely to ask for and get the help they needed. New teachers were often reluctant to expose any weakness. One eighth of the inexperienced teachers reported that help received in difficult situations was "too little and too late."

Principals, on the other hand (Trask, 1964), are reluctant to interfere in a classroom, although they agree that they must deal with serious discipline problems. More help with teaching techniques is given by women principals, who have more elementary classroom experience, while the men

principals tend to give less time to supervision or redefine it to include the provision of supplies and other more general activities. Teachers felt supervisory conferences were most supportive and helpful when the principal combined direct and indirect behavior (Blumberg and Amidon, 1965). The principal's support of teachers in their problems with pupils and parents was valued more than anything else he did. Participation in decision making was important to teachers only when the decisions vitally concerned them (Bridges, 1961). Such participation decreased as school size increased. Principals considered faculty meetings "attractive, free, and productive situations" (Amidon and Blumberg, 1966), while teachers reported that they were generally cautious in their participation and neutral or negative in attitude.

Suggestions for Further Research

The needs and possibilities for future research are infinite, but the complexities and difficulties are equally impressive. Some studies raise particularly useful clues in the form of questions asked, methods used, or provocative results, although too many ignore important variables. Elaborate statistical analysis means little unless it is dealing with carefully obtained data on significantly posed problems. Much more care needs to be given to framing testable hypotheses, defining terms, and writing clear, readable reports.

Several studies report that different levels of difficulty are experienced by graduates of liberal arts college and university teacher training programs and those trained in teachers college programs. This finding suggests a number of questions worthy of study. Are the teachers colleges providing more realistic training for teaching, or do they draw their students from a significantly different population? Are contrasting teaching models held up by the two types of institutions? Is it the model, or the training in implementing that model, that accounts for the difference in results? Are teachers colleges training teachers to fit our present school system while liberal arts colleges and universities are more concerned with introducing change into our schools? There is a need for examining the different teaching roles and expectations of various types of school systems.

Much more study is needed of what actually happens to the beginning teacher. How do teachers change to conform to the expectations of the schools in which they begin teaching, and how are these institutional expectations expressed and perceived? Careful examination is needed of the various methods used to help teachers who are in difficulty, and their effects require careful examination as well. What difference does the "sink-or-swim" autonomous classroom arrangement, compared with the team teaching situation, make in the induction of the new teacher, in teaching tasks and expectations, and in the satisfaction derived from teaching? One study discussed above suggests a provocative field for further

research in its report on the different qualifications and behavior of the male and female elementary school principal.

A great many studies have given us an overall description of the personality, motives, and needs of those who choose teaching as a career. The effort to discover how these characteristics, needs, and desires actually affect teaching and interact with the personalities of different pupils is difficult but much needed. Under what conditions do dependency needs, for example, result in authoritarian rather than supportive teacher behavior toward pupils? What satisfactions are important to different types of teachers, and how do they actually obtain them in their teaching? How does the difference in pupils' perceptions of their teacher affect their reaction to specific teacher behaviors? The ways in which teachers become more objective toward themselves and others is particularly crucial when there are wide cultural differences between teacher and pupils.

Application of the methods and findings of clinical and perceptual psychology to the teacher-pupil and teacher-adult relationships as they occur in process seems to offer greater possibility for significant discoveries about teaching than to static concepts of teacher traits or continued polling of opinions about effective teaching. Careful observation of specific teaching behaviors is just beginning, and studies of both teachers' and pupils' perceptions of the process are still too few. Most studies of the teacher continue to ignore sociological factors which influence and define that role. Values, explicit and implicit, within awareness and below the level of awareness, affect everything that is done in education. Intelligent choice of methods to implement chosen values will come only from a knowledge of the particular effects of certain defined processes under specific conditions.

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CHAPTER VI

Strategies for Allocating Human and Material Resources

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Decisions about patterns for grouping students, assigning staff members, and housing pupils and programs are central to the operation of school systems. In the October 1964 REVIEW, studies bearing upon these topics were discussed in separate chapters by Anderson and by Conrad and Griffith. Their inclusion in this single chapter reflects, in part, the judgment that the amount of recent research done in any one of them is insufficient to require its independent treatment. More significantly, this clustering testifies to the growing tendency to recognize the interrelatedness of student grouping, staff utilization, and school facilities for purposes of educational planning and research.

The concept which provides the unifying theme for this chapter is that of allocative strategies in which pupils, staff members, materials, and facilities are considered resources which can be organized in various mixes to produce educational experiences. Literature reviewed herein includes (a) sources which report current patterns in the allocation of such resources and (b) studies which comment upon outcomes associated with particular allocative patterns.

Coordinated Planning

A summary position of the emerging view toward allocative strategies for schools was stated by Goodlad, O'Toole, and Tyler (1966). Reviewing the prospects for computer applications and information systems in education, they noted that "for the full possibilities of innovation to be seen and acted upon, education must be viewed all of one piece." Indications point to an approaching time when those who decide how to group students and assign staff will consider not only data related to financial cost, space, and student achievement, but information about concomitant effects on other variables as well.

To date, the most extensive work on coordinated planning for schools has been in the area of master schedule building. Holzman and Turkes (1964) reported on the University of Pittsburgh project to develop algorithmic, linear programming, and heuristic models for master scheduling. Murphy (1964) discussed the development and capabilities of Generalized Academic Simulation Programs (GASP) developed by Holz at Massachusetts Institute of Technology. Allen and DeLay (1966) indicated that the Stanford School

Scheduling System built master schedules and assigned students to classes in 26 school districts. Computerized master schedule building has made possible the coordination of time, student course requests, staff assignments, and space availabilities in innovative combinations which individuals could not contrive.

New directions for educational planning were outlined by several investigators. Kaimann (1966) noted the applicability of the Program Evaluation Review Technique (PERT) to educational problems. Struve and Rath (1966) pointed out that the use of planning-programing-budgeting procedures could aid in projecting future costs and benefits of educational programs. In his report on linear programing techniques for master schedule building, Harding (1961) discussed the ability of this method to provide "shadow price" information. These data constitute a "means for evaluating the marginal returns for potential changes in physical plant, personnel resources, student demand, and administrative policies."

Cogswell (1966) described a project in progress which is utilizing systems analysis techniques to simulate the operations of five high schools. When completed the simulator will be able to register and interrelate such variables as curriculum organization, spatial arrangements, student scheduling procedures, student advisory procedures, and student characteristics. By introducing variations in any one of these characteristics to the simulator, future researchers will be able to determine its effect upon other characteristics, thus providing an empirical basis for subsequent judgments about combining personnel, media, and space.

Student Grouping and Scheduling

A comprehensive volume which reviews and appraises student grouping practices in the United States, the United Kingdom, and the countries of Northern and Western Europe was edited by Yates (1966), who summarized the discussions of an international conference. The conference delegates called attention to trends toward (a) less segregated and more comprehensive schools, (b) more heterogeneity in intraschool grouping, with the United States as a partial exception, and (c) new teaching methods which individualize instruction, thereby weakening arguments for homogeneous grouping. The report has special value as a basic reference because it includes an extensive bibliography and abstracts of 50 studies which examined grouping procedures.

Flexible Scheduling

The accommodation of school programs which involve team teaching, independent study, large-group instruction, and similar innovative practices requires flexible scheduling procedures. Books by Bush and Allen (1964) and Manlove and Beggs (1965) provided guidelines for school systems

interested in flexible scheduling. Bush and Allen presented a plan for schedule building which depends upon the concept of modular units. Manlove and Beggs developed a flexible scheduling model based upon a 30-minute time module and a class cycle of one week. Both texts offered suggestions for adapting faculty assignments to flexible schedules, and both noted the value of computer assistance in schedule development.

Several writers reported on experiences with innovative scheduling formats. Polos (1965) reported that the 21-module (16 minutes each) day employed by Claremont (California) High School encouraged students to enroll in more courses than they took in the days of traditional scheduling. Georgiades and Bjelke (1961) conducted an experiment wherein 56 eleventh-graders attended English class three days a week and were allowed to enroll in electives (academic or fine and applied arts) on the other two days. Utilizing a matched pairs design, they determined that the achievement of the experimental group in English was at least equal to that of students enrolled in English five days a week. The elementary school described by Carswell (1966) represents what may be the ultimate in scheduling flexibility, for there each teacher specifies which children he wants to see and for how long on a day-to-day basis.

Manlove and Beggs (1965) requested principals of 33 schools which use some form of flexible scheduling to enumerate the advantages and disadvantages associated with their programs. Advantages which they noted include (a) greater possibilities to adapt to student differences, (b) increased teacher participation in school decision making, (c) more teacher time to work with small groups, (d) increased student responsibility, and (e) greater opportunities to use resource persons. Reported disadvantages include (a) increased time required for schedule building, (b) the possibility that insufficient time is devoted to particular subjects, (c) potential difficulty for students to identify with their teachers, and (d) difficulties in explaining the program to the public and some teachers. These findings should be interpreted cautiously, however, because of differences among the programs in the schools which were surveyed and the absence of any indications regarding the frequency with which particular observations recurred.

Nongraded Schools

Nongraded school organization continues to attract the interest of American educators, but the status of research on the topic is not dissimilar from that described by Anderson in the October 1964 REVIEW. The National Education Association (1965b) surveyed all public school districts with enrollments of 12,000 or more pupils and found that 32.3 percent of the responding districts operate nongraded schools. Some indication that nongraded organization is still considered to be experimental is reflected in the finding that 57.9 percent of the responding districts have only five or fewer schools of this type. The same survey revealed that 64.9 percent of

the districts with nongraded schools were so organized at the primary level, but that only 3.1 percent of these districts had a nongraded high school plan.

The academic achievement of children in nongraded primary schools was examined by Williams (1966) and by Hopkins, Oldridge, and Williamson (1965). The former took a group of 38 pupils who had spent three years in either of two nongraded primary classrooms and paired them on the basis of age, sex, and IQ with an equal number of pupils who had spent three years in one of three graded classrooms. Administration of the *Stanford Achievement Test* to both groups indicated no overall relationship between graded and nongraded school organization and pupil achievement. A subordinate finding was that high-scoring pupils tended to do better in nongraded situations, while low-scoring pupils did relatively better in graded classrooms.

Hopkins, Oldridge, and Williamson (1965) studied the performance of students in 20 graded and 25 nongraded primary classrooms and found no significant relationships between classroom organization and reading achievement. Looking at some other variables, they reported the absence of significant relationships between forms of classroom organization and student attendance patterns, pupil sociometric patterns, and several measures of teacher satisfaction. Within the last category, however, they did note that nongraded classroom teachers (a) perceived a higher level of parental satisfaction with the school program and (b) were less satisfied than graded classroom teachers with the available supply of instructional materials.

Criteria for Grouping

The assignment of students to track or ability groups is an administrative practice of long standing. Yates (1966) reviewed recent European research on this subject. In the same volume, Passow (1966) summarized American studies which deal with ability grouping and emphasized their inconclusive nature. Recent large-scale studies of ability grouping and its effects were completed by Borg (1966) and by Goldberg, Passow, and Justman (1966). Borg collected data on more than 1,000 students in five grades over a four-year period. His findings related grouping practices to achievement, study methods and attitudes, sociometric choices, pupil attitudes, pupil problems, self-concept scores, and personality factors for elementary and junior high school pupils of slow, average, and superior ability. Goldberg, Passow, and Justman studied 2,200 New York fifth- and sixth-graders who were grouped by varying degrees of homogeneity. They concluded that ability grouping by itself cannot improve academic achievement for any group of pupils, but added that it does not have any negative effects upon pupil self-attitudes, social perceptions, aspirations, or interests. Their conclusion that ability grouping for the purpose of special curriculum offerings may have merit was parallel to that of Hansen (1964), who discussed the development and operation of the four-track curriculum in Washington, D.C. Hansen depicted

ability grouping as a practice essential to the maintenance of comprehensive high schools.

Thelen (1967) experimented with "teachability" as a criterion for assigning students to particular classes. Working from the premise that "each teacher finds some students more 'teachable' than others," he asked teachers to specify characteristics which enable students to "get a lot out of class." Thirteen teachers were each assigned classes composed of students who possessed the characteristics, identified by tests, which their respective teachers had specified. Comprehensive tests and observations of these classes indicated that such grouping increased the effectiveness of teachers and led Thelen to suggest that grouping should be done by teachers rather than by administrators.

School and Class Size

The effect of school size continues to be a popular subject for inquiry. Monahan (1965) studied 15 Los Angeles high schools and found that teachers in schools with enrollments in excess of 2,100 students show significantly less knowledge about their students than do teachers in schools with fewer students. In a study of 63 Michigan high schools, Kleinhart (1964) determined that student participation in school-related activities is more widely distributed in smaller schools.

Riew (1966) investigated the cost of operating high schools in Wisconsin and concluded that the economics of scale are significant. He noted that when crude controls for school quality are introduced, increases in enrollment are accompanied by decreases in per-pupil expenditure, increases in numbers of courses offered, and increases in the percent of teaching staff in possession of master's degrees. While the decline in per-pupil expenditure levels off when enrollment reaches 1,600 students, the percent of the faculty holding the advanced degree and the number of courses offered continue to increase. Riew acknowledged that further study of these relationships would be appropriate with a sample which includes a greater number of large school districts.

One approach taken by school districts faced with increasing enrollments has been the adoption of schools-within-schools plans. Plath (1965) reported the experiences of school systems using this form of organization. He suggested that it may be the solution to the dilemma of increasing secondary school enrollments and increasing emphasis upon concern for individual students.

Surveys of class size and pupil-teacher ratios were reported by the National Education Association (1965a) and by Danowski and Finch (1966). The NEA pointed out that elementary school classes tend to be largest in big cities and in the Southeastern United States. Danowski and Finch indicated that recent years have seen a rising trend in numerical staffing adequacy in schools across the nation. They, like Riew (1966),

noted a direct relationship between the number of professionals per pupil at work in a school and the amount of training which they possess.

In their comprehensive survey of equality of educational opportunity, Coleman and others (1966) presented findings which corroborated the observations of many researchers who have investigated the effects of class size on a much smaller scale. They observed that pupil-teacher ratios in instruction "showed a consistent lack of relation to achievement among all groups under all conditions."

Research on the effects of class size and pupil-teacher ratios has been complicated by the emergence of team teaching and variable scheduling arrangements. The advent of large-group instruction, small-group instruction, and independent instruction discourages studies which seek to determine an optimum constant for class size. Although many writers have offered suggestions regarding the appropriate size of large and small groups and the amount of time which students should spend in each situation, a place remains for carefully designed research which investigates the correlates of varying the size and meeting frequency of instructional groups.

Evidence continues to mount that independent study has merit as an instructional format. Davis (1966) compiled an extensive annotated bibliography on this subject. Beggs and Buffie (1965) edited a series of papers which describe promising patterns for utilizing independent study at all grade levels. In a study of high-ability college students, Hartnett and Stewart (1966) found that the final examination performance of students who studied independently for the entire term equaled or surpassed that of equally able students who attended traditional classes. Congreve (1965) described an ongoing project at the University of Chicago Laboratory School which began as an attempt to give students the opportunity for independence and then shifted to an effort to teach students to become independent. He reported that students have made satisfactory subject matter gains and have also increased in their ability to learn independently.

Staffing Patterns

An important factor in determining staffing patterns has been the longstanding shortage of teachers. Evidence that this constraint is easing came from the National Education Association (1965c), which reported that the shortage is now limited to certain geographical areas and particular grade or subject specializations. Sampson, Bagley, and Anderson (1965) surveyed practices associated with the part-time assignment of women in teaching which has been seen by some persons as a means of coping with teacher shortages.

Reber (1965) reported that most of the staffing innovations established as part of the Experimental Study of the Utilization of Staff in the Secondary School have persisted after the termination of foundation support. He also noted that many participating schools encountered difficulty in evaluat-

ing their programs. This finding was corroborated by Harrison (1965), who indicated that most of the team-teaching programs which he surveyed were hastily undertaken and manifested greater concern for implementation and dissemination than for design and evaluation.

Team Teaching

Several projects which related team-teaching programs to student achievement were completed during the period under review. Lambert and others (1964) compared the achievement of two team-taught elementary groups (one primary and one intermediate level) with that of self-contained classes. The experimental primary class exceeded the achievement level of its two control groups, but the team-taught intermediate class did not. Klausmeier and Wiersma (1965) found that low-ability junior high school students achieved better in English but not in social studies when team-teaching methods were employed. Georgiades and Bjelke (1966) reported higher English achievement by ninth-graders enrolled in a three-period (algebra, English, and social studies) team-taught class than by students in conventional classes. Bair and Woodward (1964) associated instructional gains among junior high school students in Lexington, Massachusetts, with team-teaching arrangements.

Interpretation of studies which relate team-teaching patterns to student achievement is complicated by the differences in the treatment which is applied in various programs. There are almost as many operational definitions of team teaching as there are schools employing the practice. Thus, most studies evaluate the impact of a particular program in a particular locale. Moreover, as Heathers (1965) noted in a review of research on team teaching, there is a lack of studies which relate any specific program aspect (e.g., team leadership, teacher specialization, or flexible grouping) to learning outcomes.

One can question whether the effects of team teaching or specific aspects thereof upon student achievement constitute the most appropriate focus for inquiry. A study by Zweibelson, Bahnmueller, and Lyman (1965) indicated that achievement did not vary among team-taught and conventionally taught classes when the same teacher employed the same course of study with both groups. Research which examines the extent to which team organization encourages curricular innovation would seem to be in order. The finding by Lambert and others (1964) that change in the composition of a teaching team resulted in lower content emphasis, less direct teacher influence, and more student talk suggests the need for studies which examine teacher variables in relation to team organization. Shaplin (1965) delineated some theoretical perspectives for research on team teaching which relate to concepts of administrative and organizational theory. Anderson (1966) summarized findings from several studies and indicated the need for further research on questions related to organizational development, teacher preparation, and interpersonal relationships.

Findings relating team teaching to variables other than achievement were reported by Zweibelson, Bahnmuller, and Lyman (1965). They noted that team-teaching organization was associated with improved student attitudes and increased class participation by lower quartile students. Lambert and others (1964) found no significant relationships between classroom organization and (a) student personal and social adjustment, (b) teacher awareness of student characteristics, (c) student absenteeism, and (d) frequency of disciplinary infractions. Bair and Woodward (1964) and McIntosh and Ryan (1965) examined the attitudes of teachers toward team-teaching programs.

Lambert and others (1964) introduced a new methodology to research on team teaching by employing techniques of interaction analysis. Most other researchers continued to rely upon questionnaires, standardized achievement tests, and participant-observer analyses. The case which Anderson presented in the October 1964 REVIEW for increased methodological rigor in research on team teaching continues to have relevance in 1967.

Nonteaching Personnel

In recent years, respect for the professional aspects of teacher roles has increased. A corollary to this development has been serious attention to the ways in which other school personnel can assist teachers. For example, a series of reports on practices designed to free teacher time for planning and instruction was published by the National Education Association (1966). Anderson (1966) discussed the changing nature of teaching as a career and noted the importance of supplementary career roles in this process.

Proposals for teaming principals were advanced by Anastasiow and Fischler (1964) and by Greig and Lee (1965). Potential advantages which they attributed to such arrangements include greater opportunities to (a) coordinate specialists, (b) evaluate teachers, (c) coordinate administrative tasks common to all buildings, and (d) develop curriculum leadership in subject matter fields. Miller (1965) conducted a case study in Palo Alto, California, wherein five principals work as an administrative team. He reported that the arrangement offered advantages for coordination and the application of subject matter expertise but that informal contacts between administrators and teachers were reduced.

Cogan (1964) and Amidon, Kies, and Palisi (1966) discussed efforts to employ group techniques in the supervision of teachers. On the basis of experiments with group supervision in the Harvard Summer School Program, Cogan indicated that group supervision may (a) reduce anxieties present in individual supervisory arrangements, (b) contribute to the professionalization and further specialization of supervisors, (c) exert greater persuasive power upon teachers, and (d) encourage research. Amidon, Kies, and Palisi conducted an in-service education program in which groups

of teachers used tape recordings to construct matrices of teacher-pupil interaction in their own classrooms. The results provided data for group analyses of individual teaching techniques.

The use of teacher aides and other nonprofessionals has been advocated as a means of freeing teachers for greater attention to the professional aspects of teaching. Funds made available by recent federal legislation have enabled many school districts to employ such personnel for the first time. There has appeared simultaneously a plethora of descriptive and hortatory articles suggesting ways of using nonprofessionals, but few studies have been done on the subject. Hopefully the increased use of nonprofessionals will be accompanied by further research on (a) selection and training procedures, (b) relationship with teachers and students, (c) aide effectiveness at various tasks, and (d) resultant changes in teacher work patterns.

Schmitthausler (1966) analyzed programs using nonprofessionals in four elementary school systems. His efforts revealed greater satisfaction on the part of teachers and aides when teachers helped select the aides to work with them. He also found that the relationships of teachers with paid aides and volunteers differed. Aides were aware of their contractual obligations; volunteers sought reciprocal relationships with their cooperating teachers, and, in the latter case, most teachers were unaware of these expectations.

Janowitz (1965) discussed the development of out-of-school volunteer programs and posed the important question of how these activities can relate to school systems. A partial answer was provided by Leggatt (1966), who investigated the conditions under which nonprofessionals are introduced into school systems and the effects of their presence. On the basis of observations in nine cities, he concluded that the introduction of nonprofessionals can lead to structural changes in school systems such as the establishment of new roles and offices. In discussing their impact upon teachers, Leggatt noted that aides can (a) provide supplementary or enrichment services, (b) perform "mopping-up" or clerical functions, or (c) contribute to a restructuring of roles which enhances teacher status.

Supplementary Technology

Developments since publication of the October 1964 REVIEW indicate that the ultimate impact of technology upon education may be even greater than was then projected. Many writers have theorized about the effects of computer-assisted instruction, programmed learning, and educational television upon the assignments and responsibilities of teachers. For example, McCusker and Sorensen (1966) offered a perspective for re-examining the traditional school district balance between investments in teachers and instructional materials. Loughary (1966) suggested that developments in educational media will create the need for several types of nonteaching specialists in schools. Janowitz and Street (1966) discussed ways in which schools may adapt to new technologies.

Evidence that we are still at the beginning of the era of educational technology was provided by Conant (1967). In a survey of the programs in more than 2,000 middle-sized American high schools, he found that only 10.9 percent place much reliance upon instructional television in one or more subjects, and only 16.2 percent make use of programmed instruction. This implementation lag probably constitutes at least a partial explanation for the dearth of research on the implication of technological innovations for staffing patterns and teacher behaviors. One of few such studies was done by Guba and Snyder (1965), who found that participation in the Midwest Program for Airborne Television Instruction had little effect upon teacher roles.

Most studies have concentrated upon developing educational materials and testing their instructional adequacy. The comprehensive volume edited by Glaser (1965) is a useful guide to research on teaching machines and programmed learning. Murphy and Gross (1966) reported on the use of educational television in American schools and colleges. Developments related to computer-based instruction were summarized by Goodlad, O'Toole, and Tyler (1966) and Stolurow and Davis (1965). Although the ability of technological devices to provide worthwhile learning experiences is no longer doubted, questions remain about techniques to maximize instructional effectiveness. Progress will be made as studies which examine the teaching of men and machines on a competitive basis give way to efforts to determine the most productive combinations of human and technological capabilities.

Preliminary indications of the impact which computer applications may have upon staffing patterns were given by Suppes (1966), Page (1966), and Loughary, Friesen, and Hurst (1966). Suppes pointed out that computer-based instructional systems can provide drill and tutorial lessons for students at several different ability levels, shifting students from one level to another on the basis of their past day's performance. The computer will readily identify students who have learning problems, and will give teachers more time about the nature of these problems, and will give teachers more time to work with such students on an individual basis. Page reported progress in programing computers to grade student essays. Loughary and his colleagues conducted a study which indicated that it may be feasible to assign certain counseling duties to computers.

Housing Educational Programs

The literature dealing with school housing continues to be dominated by descriptive and testimonial reports based upon experiences in single school districts. Major exceptions to this generalization during the review period were several surveys conducted on a regional or national basis. Relatively few researchers examined effects, or associative relationships, of decisions to allocate resources for particular types of schoolhouses. However, the

recurring discussion of such relationships indicated that their further study may be imminent.

Although it reflects a dearth of systematic research, the literature indicates that the period under review was one of exciting developments in the area of school planning and construction. Modern schools have clearly moved away from traditional patterns of "eggcrates" and "double-loaded corridors." This shift can be attributed to trends which give increasing recognition to (a) the role of school buildings in social environments and (b) the relationships of housing considerations to new educational programs.

The Changing Schoolhouse

Gores (1966) pointed out that after 100 years of design dictated by standard specifications, the schoolhouse has broken out of its boxes. He emphasized that educational changes including major revisions in content, improved knowledge about learning processes, and advances in teaching technology are affecting the form and structure of schools. Examining trends in the construction of other building types, Brubaker (1966) suggested that plans for new schools might incorporate ideas related to multipurpose buildings, vertical growth structures, open plans, utility towers and cores, privacy in open spaces, and integration of service and research functions. Buildings which provided the examples from which Brubaker drew included a restaurant, a hotel, an office building, and a medical center.

Those who design schools in the future will be able to refer to an increasing amount of research which deals with environmental effects (Educational Facilities Laboratories, 1965c, d, e). Such studies may provide the basis for an environmental science directed toward more effective design and control of learning environments. Larson (1965) presented a case study documenting the effect of windowless classrooms on elementary school children. The results indicated that children show very little interest in whether their classrooms have windows, that the windowless environment may have some effect on learning, and that teachers prefer windowless classrooms.

Schoolhousing Needs

As new conceptualizations of the education process and innovations influence school architecture, the need to house additional numbers of pupils does not diminish. Collins and Stormer (1965) surveyed 18,000 school buildings selected to represent public school plants in use during the 1964-65 school year and found that 30 percent of all pupils were in plants with 30 or more pupils per room. They noted that more than 57,000 additional rooms would be required to reduce the average national class size to 30 pupils per room. Collins and Stormer also collected data on nine specific physical characteristics of school buildings: structural soundness,

heating systems, fire alarm systems, stairwell construction materials, stairwell enclosures, building exits, fire detection systems, electrical capacities, and lighting conditions. They reported that only 16 percent of the school buildings surveyed had no deficiency in these areas. Approximately 46 percent of the buildings revealed one such defect, 23 percent had two defects, and 15 percent suffered from three or more defects.

School Management (1961-1966b) reported that after a national decline to 56,246 new classrooms completed in 1963 (67,165 classrooms were completed in 1962), an upward turn occurred in 1964 when 62,026 classrooms were completed. Collins (1965) predicted that although the influx of children into the public schools will slow down, schoolhousing needs will continue to grow due to the increasing holding power of the schools and demands to house specialized programs.

The traditional city schoolhouse has been ill suited to the task of helping to resolve social, economic, and racial problems. A report from Educational Facilities Laboratories (1966b) documented the importance of school buildings to the sociology of the city. The report suggested that appropriate location of a city school can substantially reduce segregation and that its size and facilities for accommodating community services can contribute to improving urban living conditions.

Chase (1964) identified problems associated with planning urban school facilities. He related school planning to metropolitan planning, urban renewal, expressway development, zoning regulations, and housing controls. In a later document, Chase (1965) indicated that school planners in several cities have utilized joint-occupancy buildings: school facilities which can be converted to other uses; portable, demountable, and mobile classroom units; educational parks and plazas; and compact or multi-use facilities which fit unusual sites.

Educational parks have been suggested as alternatives to neighborhood schools. Mauch (1965) defined the educational park as "a large urban complex in which a number of educational divisions are grouped together to serve persons from a wide area and at various levels of education." Thomas (1965) proposed that the secondary educational park be designed to provide a synthesis between the objectives of integration and educational quality. East Orange, New Jersey, will consolidate all schools in the system into a single educational plaza on a 4-4-4 plan (*School Management*, 1966). The Pittsburgh Board of Education (1966) reported plans to establish educational parks which center upon a large and highly visible core, the "Great High School." This core will house a high school with an enrollment in excess of 4,000 students and possibly a community college or technical institute. Traffic routes and walking areas will link it with middle, elementary, and preprimary schools.

The middle or intermediate school is often associated with the educational park concept; however, a number of school districts have developed middle schools without building the large complex characteristic of an edu-

cational park. The middle or intermediate school is simply a school between two other schools—the elementary and the high school. Murphy (1965) discussed the evolution of the middle school concept and emphasized related architectural developments. Her report on 11 school systems suggested that the middle school is one route to better education for preadolescent children and described the middle school facilities in each of these districts.

Rapid and unexpected population shifts often plague school districts in metropolitan areas by demanding the presence of "instant schools." The use of relocatable facilities has constituted a popular response to such demands. A national survey conducted by Educational Facilities Laboratories (1964) identified four basic types of relocatable structures (portable, mobile, divisible, and demountable) and reported data about their use in 23 school districts.

The use of relocatable units is one approach to increasing flexibility in schoolhousing. MacConnell (1966) described another approach as it has evolved in the School Construction Systems Development project (SCSD). The project was established to develop a group of standard building components which help build better schools, build schools more rapidly, and build schools more economically. An interim report by Educational Facilities Laboratories (1965b) documented progress with SCSD components in 22 separate building projects. SCSD has stimulated manufacturers to develop new products specifically for schools and to work together so that their products constitute a system.

For the first time in many years, the literature of school planning and construction reflects widespread interest in school modernization, renovation, and rehabilitation. The Research Council of the Great Cities Program for School Improvement (1965) reported that more than 15 percent of the public schools in 15 major American cities were constructed prior to 1900. The aging of the nation's schools was also noted by Collins (1964), who reported that 30,000 public schools contain 238,000 classrooms which have been in use for more than 45 years. By 1970, he added, an additional 242,000 classrooms will be over 40 years old, placing 45 percent of the country's classrooms in an "old" category.

Criteria for determining the feasibility of renovating a given structure were developed by Aker (1966), Hult (1966), and Sessions (1964). Other approaches to modernization were reported by Featherstone and Leu (1964) and by Gilliland and Roaden (1965).

Schoolhouse Planning and Building

The revised *Guide for Planning School Plants*, by the National Council on Schoolhouse Construction (1964a), represented a major contribution to the literature on school planning and building. Although related to past versions of the *Guide*, this edition reported much new information on (a) planning and programing of the educational plant, (b) spaces and equipment for learning, (c) noninstructional plant facilities, (d) balanced

conditioning of spaces, and (e) principles of economy and resource utilization. The Council (1961b, 1965) continued to publish its convention proceedings, which include summaries of research in school planning and construction. Leu (1965) and McClurkin (1964) prepared other general works on school plant planning.

An important report on issues involved in the effective use of school building resources was prepared by Oddie (1966). Basic sources for this work were the data gained from the Development and Economy in Educational Building Project, which was staffed by national teams from Greece, Portugal, Spain, Turkey, and Yugoslavia. Oddie identified likely prerequisites for successful implementation of school building programs, examined factors associated with the cost of construction, and suggested methodologies for deciding how to allocate resources for school construction.

Griffith (1966) indicated that a long-range schoolhousing plan should take into account such factors as (a) the potential for residential dwelling unit construction, (b) the potential number of students coming from each dwelling unit in various areas of the school district, and (c) established policies which affect the size, nature, and location of school buildings. Engelhardt (1965) analyzed 26 projects and compiled responses from 19 architects in an investigation of the amount of time required to plan and construct school buildings. Porter (1965) and Silverthorn (1965) emphasized the importance of aesthetic considerations in planning and constructing schools.

Nelms (1965) interviewed 19 recognized leaders in school plant planning as a basis for developing a standard form for use in preparing educational specifications for elementary and secondary school buildings. Hoerner (1964) studied the process of educational planning for public school construction in Delaware. He reported that only 44 percent of the districts which had built new schools since 1955 developed written educational specifications for them. Hoerner also noted that administrators frequently involved lay committees in the planning process and that administrators reported difficulty in ensuring that such committees define their roles in advisory terms.

Two researchers examined the relationship between new instructional programs and school facilities. Price (1965) reviewed the student grouping procedures in 30 secondary schools and reported that administrators in these schools acknowledged their need for more individual study spaces and flexible instructional areas. Gilmore (1965) studied the same problem and reported that large spaces and movable partitions were those building features which contributed most effectively to new instructional programs.

Experiences with several innovations in schoolhousing were reported. Educational Facilities Laboratories (1966a) described auditorium installations which can be divided by operable, sound-retarding partitions to create spaces usable for purposes other than drama or assemblies. *American School and University* (1965) reported uses and patterns for supple-

mentary educational service centers. An inexpensive way of providing enclosed play space was detailed by Robertson (1964). Air structures, buildings blown up and held by air pressure, were used at the Forman School of Litchfield, Connecticut, over a swimming pool and over a tennis court that doubled as a gym. The experiment demonstrated that well-designed air structures could be reliable and practical enclosures for physical education. Estes (1965) described the caracole form of the Valley Winds Elementary School, with the horn-shaped substructure as one means of supplying an open-space environment which encouraged greater interaction between teacher and pupil and between teacher and teacher. Educational Facilities Laboratories (1965a) provided a portfolio of open-space schools and discussed related innovations in acoustics, equipment, scheduling, partitioned and adjunct spaces, and furniture, furnishings, and equipment. Green and others (1966) edited a series of reports which discussed the development of school facilities to accommodate new educational media.

Alschuler (1964) and the Advisory Commission for Intergovernmental Reform (1966) expressed concern for building codes. According to Alschuler, planning and constructing the schoolhouse should be carried out within a building code framework which stresses the concept of "life safety." A study of intergovernmental problems arising from the preparation, adoption, and enforcement of the building codes was reported by the Advisory Commission for Intergovernmental Reform. The Commission identified problems in relationships between federal, state, and local governments and elements of the building industry most directly affected by building code regulations. It presented recommendations designed to modernize building codes, stimulate building research, reduce costs due to excessive and diverse code requirements, expedite the acceptance of new building products, and enhance the quality of code administration.

Financing School Construction

Although technical innovations continue to reduce costs, they are more than offset by increases in labor costs and the general inflationary trend. *School Management* (1964-1966a) reported on the cost of school building in a Cost of Building Index. Separate indices for building materials, on-site labor, and off-site labor indicated that over the last eight years, the greatest pressure for increased building costs has come from the labor used in constructing schools. *Nation's Schools* (1966) conducted a survey of construction costs from 23 states based on actual contract or bid prices for projects let in 1964-65. Worzalla (1967) pointed out that not all increases in school construction costs are attributable to inflation, as other factors such as increases in the amount of space provided each student and the trend toward reduction in class size contribute to higher costs.

Deering and Nance (1965) tabulated the results of bond elections held during the general elections in the 15-year period from 1950 to 1964. They

concluded that the most favorable time for holding bond elections has been the general election in presidential years. The U.S. Office of Education reports monthly on the bond market in the publication *American Education*. Furno (1964, 1965, 1966) pointed out that the typical school district spent \$39.55 per pupil to meet its debt obligations in 1965-66 and of this amount \$11.22 per pupil was paid for interest on debts. He predicted that although the cost of borrowing money has been high, interest costs will continue to rise.

Conclusion

This chapter has reviewed recent studies dealing with allocative strategies for grouping students, deploying staff members, and housing pupils and programs. Much of the literature on these subjects continues to be essays, descriptive accounts, local success stories, and status surveys. Researchers would be ill-advised to overlook these sources, however, for by portraying new patterns of practice, they point to new areas of inquiry.

Although some exceptions have been noted, most studies designed to determine the results or correlates of particular allocative strategies have (a) lacked theoretical orientation, (b) employed limited samples, (c) applied the experimental treatment for only a short time before attempting to measure results, (d) failed to introduce necessary controls for extraneous variables, and (e) focused upon learning outcomes to the neglect of other possible dependent variables. The multifaceted ambiguity which continues in the wake of these studies indicates the need for new designs and methodologies in research on allocative strategies. However, the trend toward recognizing the interrelation of pupil, staff, and housing variables combined with increasing computer capabilities and the development of systems models suggests that greater clarity may soon be forthcoming.

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